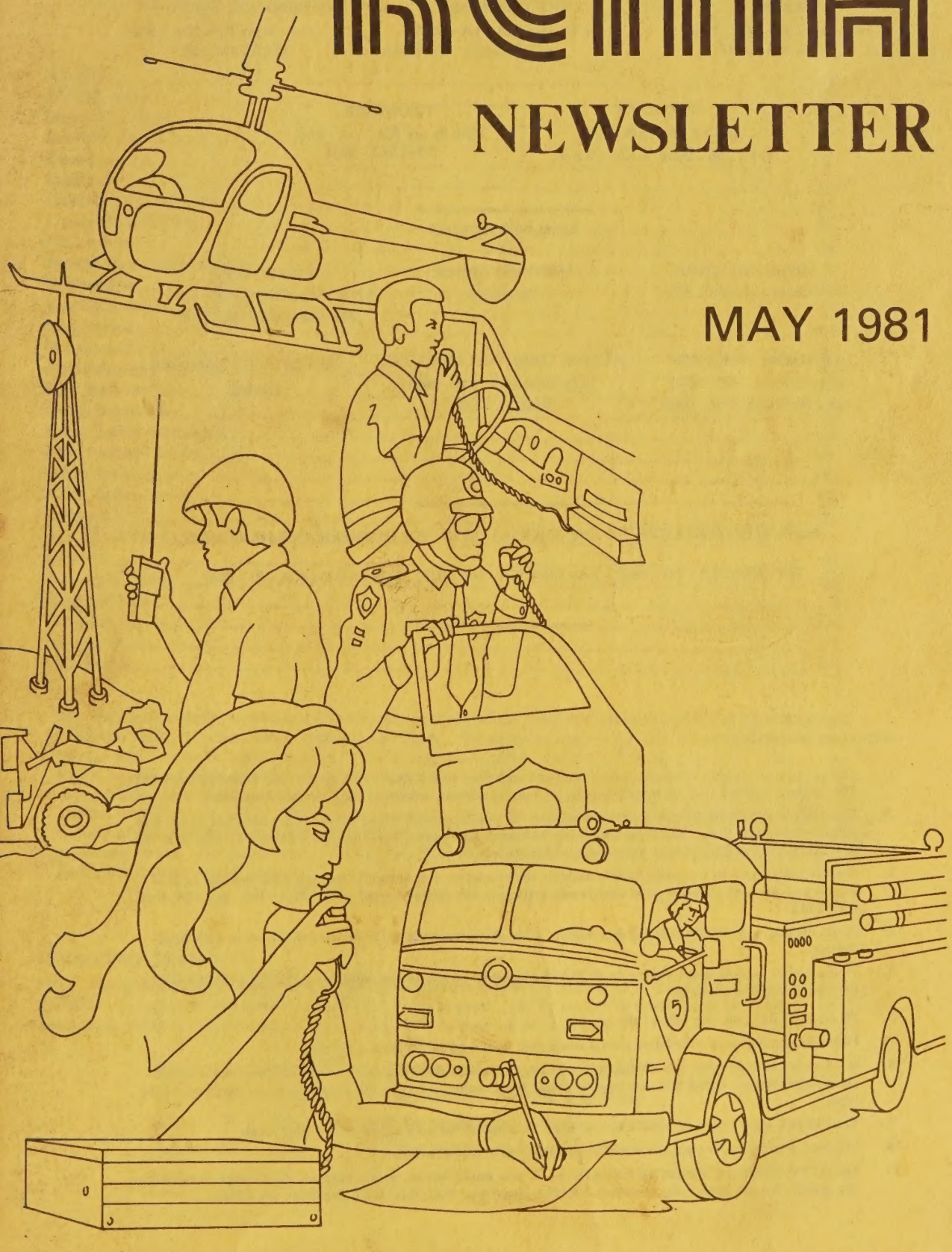
RCMA

NEWSLETTER



MAY 1981

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OF MONITOR RADIO LISTENERS

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RCMA NEWSLETTER

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FOR YOUR INFORMATION:

1. All club business, unless otherwise noted, must be addressed to R.C.M.A., P.O. Box 4563, Anaheim, CA 92803. This includes matters that relate to renewals, changes of address, newsletter delivery problems, etc.
2. Input to the RCMA Newsletter must be mailed to the proper editors, whose addresses are included in the individual column headlines. If no particular column seems appropriate, send input to RCMA, P.O. Box 216, Willow Grove, PA 19090 and mark the envelope 'For Newsletter.'
3. To forward a letter to a specific RCMA member whose address you do not know, put your message to that person in a stamped envelope with your return address in the envelope; mail to R.C.M.A., P.O. Box 408, Earp, CA 92242.
4. Please include your RCMA membership number with all correspondence to newsletter editors or club headquarters.
5. If you require a reply when writing to RCMA headquarters or one of the editors, you MUST enclose a self-addressed, stamped envelope.
6. Please write on only one side of the paper.
7. Please don't combine in one letter several items that should go to different addresses.
8. If you want to type what you submit to the newsletter, please don't exceed a seven-inch column width and please single space. Doing this may save an editor from having to retype the material. Please don't use script type.
9. Your RCMA membership number and expiration date appear on your newsletter mailing label.
10. You may join or renew your membership for ONLY one year at a time.
11. The RCMA Newsletter accepts paid advertising. If you would like to place a paid ad, please write to the following address for our advertising guidelines: RCMA Newsletter, P.O. Box 4563, Anaheim, CA 93803.

RCMA NEWSLETTER

May 1981 Issue 63

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RCMA, P.O. Box 4563, Anaheim, CA 93803

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The RCMA Newsletter is published monthly by members of the RADIO COMMUNICATIONS MONITORING ASSOCIATION, P.O. Box 4563, Anaheim, CA 92803. Subscription rate/membership fee is $12.00 for U.S. residents. For persons in other countries, the following rates apply: Canada and Mexico—$13.50; Europe—$14.50, South Pacific and Asia—$15.00. These dues are payable in U.S. funds and are subject to change. Information contained herein is obtained primarily from members and does not necessarily present the position or reflect the opinion of RCMA as a whole. The RCMA Newsletter editors and officers are not responsible for the accuracy or validity of information contained herein. RCMA does not necessarily recommend or endorse products or services advertised herein. The publication is copyrighted ©. Reproduction of any material in this newsletter is prohibited without prior written consent.

NEWSLETTER DEADLINES:

* * * please note that the newsletter deadlines refer to the month the newsletter is to be mailed, not to the date on the cover. Information submitted by November 9, for example, will be mailed to members in December. The December mailing carries a January cover date to assist USPS in their speedy delivery.

May	4	MONDAY Newsletter deadline for 'June' Newsletter
June	8	MONDAY Newsletter deadline for 'July' Newsletter
July	6	MONDAY Newsletter deadline for 'August' Newsletter
August	10	MONDAY Newsletter deadline for 'September' Newsletter

** Calendar **

Send notices of upcoming events for the Calandar section to John Clark, RCMA, P.O. Box 4563, Anaheim, CA 92803. Please send notices well in advance of the Newsletter deadline.

The R.C.M.A. supports scanning and scanner clubs. If your local R.C.M.A. scanner group is having a meeting, or if you are another radio club planning a meeting, send an announcement to the Calendar Editor and it will be sent to all members of R.C.M.A. Because of individual member requests and previous problems, the Board does not feel that sectional mailing lists should be distributed.

Greater L.A. area R.C.M.A. –
Meeting Friday, April 17, 1981, 8:00 PM at Mercury Savings and Loan, Valley View and Lincoln Avenue, Buena Park, Ca.

Midwest R.C.M.A.
Meeting change of date from 7 June to 17 June, 1981. For information as to location, contact:
Edward Robert Sirovy I1–004
311 S. Williams Street (Please include a SASE for return mail)
Westmont, Illinois 60559

Board meetings are open to all members of R.C.M.A. They start at 7:30 PM. Now that we have separated labeling of the newsletter, the meetings will be devoted to R.C.M.A. policy and, of course, the latest scanner activities.

May 5	TUESDAY	Board Meeting at Anaheim Branch Library, 1349 S. Euclid.
June 9	TUESDAY	Board Meeting at Anaheim Branch Library, 1349 S. Euclid.

NEED BACK ISSUES?

Back issues are again available for sale to members in the lots indicated below. Please note that the RCMA Newsletter is a club newsletter. Because it reflects the growth of RCMA, early issues do not contain as many articles as do the current ones. The Newsletter has evolved from a few mimeo pages to its present format under the leadership of three great editors---Don Jones, Iden Rogers, and Chuck Gysi---and the contributions of club members.

The reproduction of the articles is quite readable. To cut costs and allow the possibility of binding all the reprints in a notebook, the format of later newsletters has been changed from saddle stitch to edge binding. This has changed the page order presentation, but not the content of the articles or the frequency lists.

To order: Using the information given below, send your requests to R.C.M.A., Bill Ell, Secretary, 2831 Hermanos St., Pasadena, CA 91107. Be sure to include your name, address, RCMA membership number (it is on your label), and your check or money order payable to R.C.M.A.

PRICES VALID UNTIL JANUARY 1982

Lots (Months/Year)	No. of Issues	Price
Sept 75 – June/July 76 (No Oct or Nov published)	7	$ 2.00
Aug – Dec 76 (No Oct published)	4	$ 3.00
Jan – June 77	6	$ 4.00
July – Dec 77	6	$ 4.00
Jan – June 78	6	$ 5.00
July – Dec 78	6	$ 5.00
Jan – June 79	6	$ 6.00
July – Dec 79	6	$ 6.00

Reports of Meetings and Officers

Send reports (informal accounts) of RCMA meetings, gatherings, etc. which have occured to:
John Clark, RCMA, P.O. Box 4563, Anaheim, CA 92803.

Please note the change in the dues structure which were mentioned in the January, forward newsletters. To reiterate, the dues are:

The 50 United States	$12.00	
Canada & Mexico	$13.50	(These additional fees reflect part of the higher cost of mailing)
Europe	$14.00	
South Pacific & Asia	$15.00	

These prices are valid until July 1, 1981.

Note also the date on the top line of your newsletter label. That is the month in which your newsletter subscription will terminate. For the new members who enrolled using the rate structures found in older publications, your subscriptions have been prorated.

The last four issues have been mailed under a new procedure. The mailing date has been shifted to about five days after the Board Meetings. We used to be three to four weeks in advance of the newsletter's cover date; now, under even the worst conditions, we will be two weeks ahead of the date. You should receive your newsletter no later than the first week of the month on the cover.

THOUGHT waves

Chuck Gysi, Managing Editor, P.O. Box 216, Willow Grove, PA 19090

An Open Letter To RCMA Members

HELP!
HELP!
HELP!

I've been asking just for that for many, many months now. I've had a few nibblers but no biters.

What's it all about? It means I can't keep doing as much as I would like with the newsletter. There's no reason why, out of more than 3,000 members, there are a few who can devote some time to their club. That's right, we are a club, not a subscription to some scanner magazine. The club only works when members give a little, and sometimes a lot, to its development.

I've already decided that I cannot and will not continue to ghost-write columns for which we have no editor, such as Monitoring and the Law and Satellites. I will hold everything until new editors are ready to assume the positions.

The amount of mail I receive as managing editor is tremendous. I usually receive at least a half-dozen letters a day from RCMA members across the nation and Canada. Most require responses one way or another. Many letters are sent to me unnecessarily--they really should be sent to other column editors. And then again, many members send their troubles and problems to me, hoping I can straighten things out.

Don't get me wrong. I'm not making threats. I should be responsive to the membership as a quasi-officer of the organization. However, I need HELP! I don't want to quit. I have many ideas for the newsletter that I am unable to implement because I just don't have the time. I don't have the time to keep up personal correspondence with other members, and family and friends are used to hearing me say, "Sorry, I'm on deadline this weekend."

Not only that, I just haven't sat down and really done some solid monitoring in an awlful long time. Right now, there are frequencies four months old still sitting in my scanners.

Hey, I work more than 40 hours a week and spend three hours a day commuting to my job and still give RCMA all I can. All I ask for is help--someone who is willing to take chomps rather than nibbles.

I even was going to write a special editorial this month on problems a Midwest town has been having with scanners--but it only takes time. Besides, I feel that lack of assistance is much more imperative to our club at this time.

Sure, many of you probably have ideas of your own. Why don't I give up the Business Etc. column, some may ask. Well, business radio is one of my fortes, and if the day ever comes that I do resign as managing editor, I certainly would like to continue as Business Etc. editor. Many members have made that column easy for me to put together because the format that they submit frequencies and information is organized and TYPED as evidenced by Rick Prelinger's extensive contributions this month. Why don't I give up answering mail or stop writing editorials? There are many possible solutions, but the bottom line is if we want the newsletter to remain the top-notch publication that it is, then I need HELP!

If you can help answer the mail, if you can help ghost-write columns for which there are no editors, if you can help type up letters, if you can help collate tidbits of information, if you are sensible and have a good command of spelling and grammar and most important, can type well, then RCMA needs YOU!

I need someone with some good ideas who can get the ball rolling. If more than one responsible and qualified member responds to this pleas, that will make it easier for everyone involved. I can't fly solo any longer--a co-pilot is needed. Think about it: Who will be there when I am ready to say "I quit." It would be best if we started weaning someone for the shoes now. I don't want to give up this job, but as President Reagan slashes the budget, I'm going to have to start slashing some of my duties.

If the volunteers start coming forth within the next month or two, then I'll return to normal here, with assistance.

So to coin an automaker's phrase, "Let's get RCMA rolling."

I look forward to hearing from you.

73,

Chuck

Chuck Gysi (PA-005)
RCMA Managing Editor

YOUR THOUGHTS

P.O. Box 216, Willow Grove, PA 19090

To the editor:

I am writing to you and the membership in response to letters which appeared in the March 1981 issue of the RCMA newsletter regarding my company, FIRECOM COMMUNICATIONS.

I want to take this opportunity to bring the membership up to date with the operation of both FIRECOM and DIGICOM and also clarify some points which were made by other members in previous editions of the newsletter.

Until late 1979, the FIRECOM operation was primarily selling scanners in the New York City area. Personalized, in home service was my specialty. Along with fellow scanner enthusiasts and monitors, many of my customers are fire fighters, police officers, EMS corpsmen and others involved in emergency operations. I have been serving in the communications field for over a decade and am proud of the reputation for service and dependability I have acquired over the years.

In 1979 I decided it was time to start providing supplemental material to my customers and friends. The shift from crystal controlled to programmable scanners necessitated that I start to handle various publications and frequency directories. I established DIGICOM primarily for that purpose. (Steve Handler quite correctly notes that the company is listed to me- of course the PO box is in my name, I'm not hiding anything!) I decided to handle DIGICOM as a separate entity and under different management.

Well, two heads are sometimes not better than one- FIRECOM and DIGICOM were selling the same material, but at different prices. (More on pricing policy coming up shortly.) After reading Scott Menke's letter in the November 1980 edition, I realized that good business ethics dictated my absorbing the DIGICOM operation into FIRECOM COMMUNICATIONS.

The integration process began in December 1980 and is continuing. Persons requesting DIGICOM information and/or catalogs are getting a cover letter along with a FIRECOM COMMUNICATIONS package. While certain publications are still being published under the DIGICOM name during this transition period, I take full responsibilty for all DIGICOM and FIRECOM operations.

My pricing policy during the initial gear up stages of the publications operation incorporated the postage and handling fee into the price of each publication. This changed in December of 1980- unfortunately Steve Handler's letter in the March 1981 issue of the RCMA newsletter is a bit dated- we spoke on the phone early in March of 1981 and he advises that the letter appearing in the March 1981 edition was written in late November or early December of 1980! Steve has since received an updated price list, which does not incorporate the postage and handling fees into the price of each publication, and which lists the Radio Communications Guide published by Handler Enterprises at 7.95.

I would like to provide you with some insight about postage and handling fees. While some publishers offer their own publications "postage paid" to the retail market, distributors like FIRECOM must pay to have the material and publications shipped from the publisher to the FIRECOM distribution point. This must be taken into account when a company establishes postage and handling fees. In addition, all orders received by FIRECOM COMMUNICATIONS that include payment by certified check or money order (and providing of course that the publication is in stock, which is usually the case,) are generally shipped within 6 hours of receipt via FIRST CLASS (and in some cases, INSURED) mail.

All FIRECOM material and catalogs being distributed at this time clearly list the price of each publication and quite separately the cost of postage and handling. It is important to note that letters appearing in the RCMA Newsletter were all addressed to the issue of price and postage- there were no complaints about unfilled orders.

Two other matters I wish to clarify..... several issues back a letter from a member indicated that FIRECOM COMMUNICATIONS charges an extra "fee" to check out each unit. This is not an accurate statement. True, the FIRECOM prices on scanning equipment tend to be higher than certain other mail order companies, but I feel that it is most important to emphasize that FIRECOM is a COMMUNICATIONS operation, not a marketing operation. It is not my policy to take a box off a shelf and ship it out, that's marketing- that's not COMMUNICATIONS. I cater to those who are serious about communications monitoring. I pre-check each unit for optimum performance because that is a communications function. I've spoken with many customers (including a good number of RCMA members) via telephone to discuss their specific communications requirements. Recently, I have started a special discount program featuring select units. This discount is offered without any compromise to my quality control requirement. FIRECOM COMMUNICATIONS is NOT a marketing operation, it is a COMMUNICATIONS operation. There is a difference!

Also- a previous issue comments on the FREQUENCY EXPANSION TECHNIQUES REPORT published by DIGICOM and indicates that the price is 15.00. At the time that information was published in the newsletter it was outdated. The price of the report was at that time (and still is, as of this writing) 8.00. The report is unique in its presentation and format, and while information about frequency expansion methods for various programmable scanners has appeared elsewhere, this special report is only available through FIRECOM/DIGICOM. An information sheet outlining the contents of the FREQUENCY EXPANSION TECHNIQUES REPORT is included with each initial FIRECOM mailing.

I have asked Chuck Gysi, our editor, to point out to readers that the material you read in this column can be somewhat dated. The information appearing herein is often written months before publication, as is illustrated by Steve Handler's letter in the March 1981 issue. I want to suggest to Chuck that with each letter published in the newsletter, the date of receipt of the letter also be published. On at least three occasions, the information provided in the newsletter regarding FIRECOM and DIGICOM prices has not been accurate at the time of publication. I believe that this does both the company AND THE READER a great disservice.

I am confident that FIRECOM COMMUNICATIONS is going in the right direction. The response that I've received from RCMA members and others has been VERY POSITIVE. I want to thank my fellow RCMA members for their continued encouragement. I am composing this letter at the end of February- I understand from Chuck that it will appear in the May issue. Once again, this illustrates an important point. Time has gone by. It takes time to get things into print. If you have a question or comment about my service, please don't let it ferment waiting for publication in the newsletter. It's OK to send in your comments for publication..... but I want to take action on your comments and advice NOW, not in two or three months. If you're not happy about some product, price or service I provide, I want to hear about it RIGHT NOW. My mailing address is P.O. Box 61, New York, NY 10011. My phone number is (212) 989-5773. If I am not available to speak with you personally, please leave a message and I will contact you.

Thanks for the great response to my last letter in this column regarding the CONSUMER BULLETIN. The feedback was excellent. Also overwhelming. Because of the anticipated rise in the cost of postage as of this writing, along with increases in the cost of printing, I am requesting that persons who have not yet received the BULLETIN along with my catalog and listing of publications, frequency directories and scanners and wish to do so please forward 1.00 along with their request. This will help offset the cost involved in preparing and forwarding this material, and I will send along a 1.00 CREDIT slip with each FIRECOM package. The printing and postage costs also necessitate my charging a small fee to persons wishing to receive FIRECOM mailings throughout the year. More information about this service is contained in the BULLETIN and accompanying material.

Let me close by thanking the RCMA and its membership for providing this most essential format for the exchange of information and ideas about our hobby.

It is my belief that this organization has done more than any other in providing an essential service in terms of the dissemination of vital information via the Newsletter for the benefit of all.

The entire membership is to be applauded for a job well done!

Michael Esposito (NY-096)
Firecom Communications
New York, New York

To the editor:

MONITOR CONTROL has learned that M-Tron Industries, Inc., manufacturers of M-Tron scanner crystals has taken further steps to improve the quality of M-Tron UHF crystals. A quality control problem had occured with the making of UHF crystals resulting in some crystals being off frequency, while some were initially on-frequency, but tended to drift over time. Since the problem came to their attention M-Tron has taken several steps to improve UHF crystal quality control. Since January, M-Tron has been frequency plating UHF crystals in order to maintain the reliability of the stated frequency. This has resulted in some delay of shipments to dealers for the time being, but the crystals should be on-frequency and should remain on frequency.

All M-Tron UHF crystals received by MONITOR CONTROL since the late fall have been on frequency do to the previous steps taken by M-Tron to assure UHF crystal quality. These latest changes should assure that the crystals will remain on frequency. M-Tron stands behind the products it makes, all M-Tron crystals carry a lifetime guarantee, so that anyone who has a defective M-Tron crystals will get it replaced free of charge. Customers should return defective M-Tron crystals to their local dealers for replacement. Please note, however, that not all brands of crystals carry a lifetime guarantee, some carry only 1-year warranties, and some carry no warranty at all---once you've bought it it's yours, and that's all she wrote. Make sure the manufacturer or dealer stands behind the crystals he sells you.

Monitor Control/Scan Shoppe (CA-SM-009)
San Bruno, California

To the editor:

I have just finished Chuck Smith's "Technical Topics" column in our March, 1981 Newsletter; by my calculations, this column ran about 63% editorial and 37% Technical and other.

Chuck's talents are obvious and unquestioned, as is his importance to the club; however, I respectfully submit that he should use the facilities of the "Your Thoughts" section for comments such as these, where he would be subject to the same editing as the other members.

Also, in rebuttal, I would like to make the following points:

1) The Newsletter is a clearing house for frequencies; if he would take an objective view, he would see that the vast majority of the newsletter is devoted to nothing else but this.

2) If the mail ratio of "ten to one" in favour of publishing sensitive frequencies, as quoted by Bob Grove in his March column, can in any way be applied to the total membership, it may mean that a small number of the members are forcing an editorial policy on the large majority of the club.

This is an area where few minds will ever be changed. However it has now reached the stage where the Board of Directors should feel obligated to take

a mail vote, and club policy set according to the outcome.

(It is interesting to note that there seems to be no restriction re publishing Canadian Government (R.C.M.P.) frequencies in great numbers.)

R. Strong (CAN-024)
Windsor, Ontario

SPECIAL FEATURE

CONVERTERS AND PREAMPS FOR YOUR SCANNER

By Gordon West CA OR 017
Editor in Chief, CB Magazine

. . .Interested in souping up your scanner sensitivity? Curious as to what is found on those elusive frequencies below 420 MHz? Read on! . . .

The programmable scanner is indeed a remarkable instrument. Doing away with crystals, it's possible to tune in just about every exciting radio call on the air. Just punch in the frequencies, and presto, you are hearing stations and conversations instantly.

The programmable scanner is a highly complex receiver. Manufacturers have packed into all scanners as much circuitry as possible while keeping in mind the final price tag. A good programmable scanner offers good sensitivity for casual monitoring. However, the long-time scanner user may want even more sensitivity. Is there anything that you can do to spruce up your old scanner for bringing in those extra-weak stations? Rarely not. If there was an easy way that manufacturers could make a scanner more sensitive, they would have found it—and they would have done it.

A good sensitive receiver requires a hot "front end." The receiver "front end" consists of a good low noise moderate gain RF amplifier stage. Most scanners don't have any real RF amplification at the "front end." Most scanners are nice and sensitive for casual listening—so to keep costs down, there is not a lot of expense expended on the RF amp section.

In order to improve sensitivity on a programmable scanner, you will need to purchase an RF preamplifier. Not any RF amplifier will work. You need to find one that will offer good amplification with a low noise figure. You will also need to choose a preamp that will match the particular frequency you wish to monitor. Unfortunately, high quality RF preamplifiers are not broad banded and will not cover all the frequencies and all the bands that your programmable scanner will cover.

A good RF preamplifier is so selective that it will generally only cover about 4 MHz band width. A good preamp will increase a scanner's sensitivity up to 10 dB with a maximum noise figure less than 1 1/2dB. This will give you an excellent gain over a spread of about 5 MHz.

Let's say you wish to monitor a particular police frequency on 155 MHz. No matter what you do to your antenna or scanner, you still can't bring in the station clear enough to hear the dispatcher. Add a preamp for that particular frequency and you will find that reception will increase to the point where you will hear the calls a great deal clearer. A preamp won't solve all your problems, but it will pull "out of the mud" weak stations that are almost copyable.

Now the bad news. You will need to devise a coax switching network to take the preamp out of the line when you are monitoring frequencies other than those near the 156 MHz mark. The preamp will attenuate all other bands, and all other frequencies outside the normal 5 MHz band width. In some cases this may be a good feature where you have annoying signals interferring from another band—or frequencies interferring that are separated more than 5 MHz away.

There are even more sensitive preamps that will offer up to 20 dB of signal gain with only 1/2 dB noise figure. This incredible gain is achieved through the use of a sensitive and expensive GaAs FET semiconductor. Instead of a $50 preamplifier, we are now talking about a commercial grade $175 preamplifier that will pull in signals incredibly weak, but not pull in a lot of self-generated noise. The GaAs FET preamp is the ultimate in RF amplification with a noise figure of less than 1/2 dB.

Preamps are easily added to any scanner receiver or any single channel crystal receiver. Simply unplug the antenna from the receiver. Plug it into the preamp module. Now plug the preamp antenna cable into the scanner. Add 12 V at about 20 mA, and you are on the air! Switch the 12 V on and off and you will hear the signals jump in signal strength and then drop back into the mud when you remove the 12 V. You will need to switch to a second antenna if you wish to monitor frequencies outside of the normal 5 MHz band paths of the preamp.

I'll tell you in just a moment where you might find these products.

CONVERTERS

A similar looking module is also available for scanner enthusiasts. It is called a converter. A coverter allows you to scan frequencies your monitor normally won't pick up. If you have an old crystal monitor, and the local police have changed bands on you, don't despair—a converter will take your low band scanner and make it a UHF scanner! A programmable scanner used in conjunction with a converter will allow you to scan a whole group of new frequencies that your scanner normally won't pick up.

What frequencies are around that might have some exciting calls that your scanner won't normally pick up? That's an easy one! Try 400 to 420 MHz. What's down there, you ask? Plenty! The CIA is there. Also the FBI. Secret Service. Military. Spy channels. Government channels. Undercover channels. Every day run-of-the-mill channels. Unlisted channels.

For some unknown reason, scanner manufacturers who produce programmable scanners don't offer reception in this 20 MHz region. The very popular rumor is that one manufacturer started to produce a scanner with this elusive band on it, and the Secret Service was parked on their doorstep the next day. I frankly don't believe it—however, there's no secret as to what's down there. Bob Grove's "Federal Frequency Directory c " has 16 pages of frequency assignments in this region. Just looking at the listings would make you drool to get your scanner to go down that low and hear all the excitement. It can with a converter. Simply order a converter to cover that region. Specify what frequencies you wish to pick up these elusive channels that your regular scanner is capable of. Normally the 30 to 50 MHz band is used with a converter to cover 400 to 420 MHz. You will have to do a little arithmetic, but after a while, you learn to figure out when you're scanning 30 to 50 MHz what frequencies they correspond with from 400 to 420 MHz. Switch the converter on, put your scanner into the search mode, and hang on for some exciting calls. A good tri-band outside scanner antenna will pull in these 400 MHz signals quite well.

Is it hard to hook up a converter? Not at all. Just like a preamp, you will need to plug your outside antenna into the converter instead of the rig. Plug in the converter antenna plug into your receiver. Switch the converter on with a little bit of 12 V and presto, you're listening to a whole new band that your scanner would not normally pick up. All the frequency conversion is done inside the converter module. Most converter modules will also feature a built-in preamp to increase signal reception. This means that when you use a converter, you're getting a hotter receiver than you ever had before, on a new set of frequencies.

Another interesting frequency group to listen in on is the 135 to 144 MHz satellite band. We talk about these frequencies in detail in the January 1981 issue of CB magazine. You will hear everything from weather satellites to voice repeater satellites relaying calls from one point on earth to another. You may even hear some manned space craft communications too.

When tuning in the satellite band, it's customary to convert it down to the 35 to 44 MHz portion of your programmable scanner. This will allow you to simply add

SPECIAL FEATURE CONTINUED

100 MHz to figure out what frequency you are listening in on. Now push your search button, and you will now scan for satellite action.

Converters will cover just about any group of frequencies you wish to monitor. Interested in 900 MHz? A converter will do the job nicely! 800 MHz — 300 MHz — 200 MHz — all of these frequencies are easily converted to with the converter module.

Like the preamp, when you are scanning another band without the use of the converter, you will need to manually disconnect it from the antenna line, and feed your outside antenna directly to the scanner set bypassing the converter. Automatic switching relays would create a higher price and possibly introduce more noise into the sensitized signal.

WHERE AND HOW MUCH?

CB Magazine tried over seven sources of converters and preamplifiers in our search for a manufacturer who would build these products expressly for scanner radio users. We finally found a specialist who knows scanners, is well respected in the amateur radio ranksas a preamp and converter specialist, and holds world records in VHF and UHF long distance communications using his own products.

Lunar Electronics offers a complete selection of scanner preamplifiers—completely assembled and tested—and specifically tuned to the frequency you specify. Simply add twelve volts, and put into your antenna line. Most scanners produce a small amount of twelve volts that may be tapped to run these preamps of converters. The typical price for a good 10 db gain preamplifier with a 5 MHz band spread is $50.00.

The line of Lunar concerters incorporates not only down conversion and local oscillator, but also a senstitive 10 of 20 db preamplifier. This neat little package runs around $175.00. Remember, you're purchasing $100 worth of conversion and $50 worth of amplification.

You can also purchase separate converter moduals to expand your basic frequency coverage. Each individual converter modual is priced under $100. This lets you add unlimited number of frequencies that you may want to scan with your regular programmable scanner.

All converters are shipped with professional CB-type coaxial plugs. They offer less loss than conventional scanner jacks and plugs. Lunar will also ship within the package price the necessary adaptors so you simply plug everything in without having to run out to an electronics store for any other accessories. In other words, the package is complete, and specifically designed for your type of scanner. Once again, be sure and specify the frequency range you plan to dial your scanner receiver into.

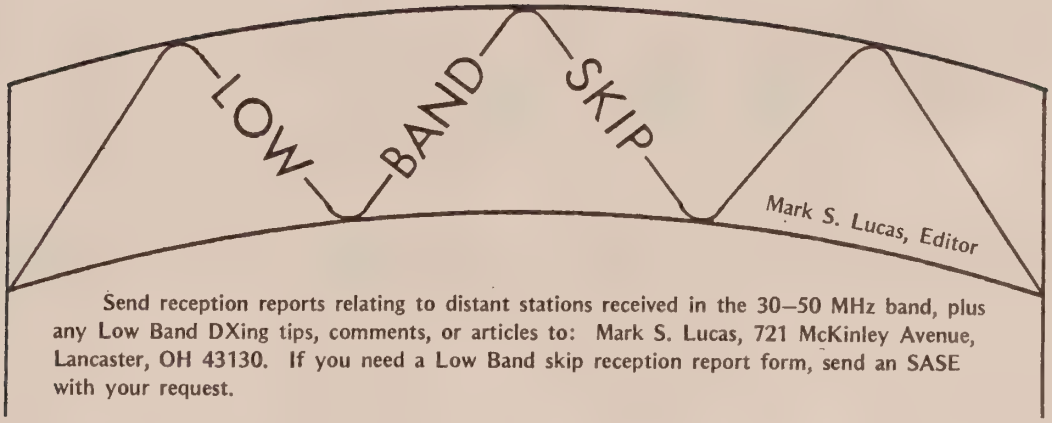
Want more information from the group at Lunar? Call Mariatte at (714)299-9742, or send your orders to Lunar Electronics, 2785 Kurtz Street, Suite 10, San Deigo 92110.

All Lunar products have been lab tested and reviewed by the staff of CB Magazine, and exceed all specifications listed on their complete preamp and converter tech sheets. There's a whole new world of scanning beyond the normal numerical readout on your programmable scanner dial. Just remember that everything you hear is confidential. Give Mariatte a call today!

look!

RCMA GETS MENTION IN NATIONAL MAGAZINE

Be sure to take a look at the April '81 issue of Changing Times. In an article entitled "Radio scanners: they snoop the airwaves" (pages 42-44), RCMA is listed as the first of three national organizations from which readers can obtain more information on scanners.



Send reception reports relating to distant stations received in the 30–50 MHz band, plus any Low Band DXing tips, comments, or articles to: Mark S. Lucas, 721 McKinley Avenue, Lancaster, OH 43130. If you need a Low Band skip reception report form, send an SASE with your request.

Well, I ask for a little and boy did I get a lot! Three BIG contributors. So, I don't like to delay all the big action for this month. Let's GO!

	FROM FRED (MM-005):		39.90 MHz	KSI 976 "Falls City"		PD
BASE	BC-210	1-20-81	2022 MST	Falls City,NEB.	750 Miles	
			39.82 MHz	KCA 722 NO ID		PD
BASE	BC-210	1-21-81	1910 MST	Thompson Falls,MT.	750 Miles	
			39.82 MHz	KCS 562 "Weiser Sheriff"		PD
BASE	BC-210	1-21-81	1924 MST	Washington Co., Idaho	750 Miles	
			42.12 MHz	NO CALL "Sacramento"	State PD	
BASE	BC-210	1-21-81	2017 MST	Sacremento,CAL.		
			33.70 MHz	KUE 698 "County"		FD
BASE	BC-210	1-24-81	0933 MST	Eagleville,PA.	1685 Miles	
			33.70 MHz	KFD 651 "Cambria Co."		FD
BASE	BC-210	1-24-81	0946 MST	Ebensburg,PA.	1635 Miles	
			33.86 MHz	KGF 801 NO ID		FD
BASE	BC-210	1-24-81	0959 MST	Montrose,PA.	1730 Miles	
			33.86 MHz	KGG 867 "867"		FD
BASE	BC-210	1-24-81	1004 MST	Milford,PA.	1685 Miles	
			33.70 MHz	KCC 705 "Control"		FD
BASE	BC-210	1-24-81	1008 MST	Holden,MA.	2010 Miles	
			33.70 MHz	KGC 676 NO ID		FD
BASE	BC-210	1-24-81	1400 MST	Hagerstown.MD.	1685 Miles	
			33.78 MHz	KEE 720 "Millburn"		FD
BASE	BC-210	1-24-81	1407 MST	Millburn,NJ.	1870 Miles	
			33.70 MHz	KDP 383 "KDP 383"		FD
BASE	BC-210	1-24-81	1418 MST	Farmersville,NY	1685 Miles	
			33.74 MHz	KQR 501 NO ID		FD
BASE	BC-210	1-24-81	1423 MST	Starsburg (State??)	1685 Miles	
			33.90 MHz	KGB 393 NO ID		FD
BASE	BC-210	1-24-81	1432 MST	Wayne,PA.	1800 Miles	
			33.82 MHz	KLO 327 NO ID		FD
BASE	BC-210	1-24-81	1436 MST	Goochland,VA.	1650 Miles	
			33.90 MHz	KCA 661 NO ID		FD
BASE	BC-210	1-31-81	1452 MST	Carver,MA.	2030 Miles	
			33.86 MHz	WZQ 675 NO ID		FD
BASE	BC-210	1-31-81	1339 MST	Bixton, Maine	2080 Miles	
			33.62 MHz	KDQ 223 NO ID		FD
BASE	BC-210	1-31-81	1425 MST	E. Brunswick,N.J.	1846 Miles	
			39.18 MHz	KGD 211 "Bradford Co."		PD
BASE	BC-210	2-1-81	0903 MST	Powell, PA.	1680 Miles	
			39.18 MHz	KSL 490 NO ID		PD
BASE	BC-210	2-1-81	0918 MST	Belmont, NY.	1660 Miles	
			33.74 MHz	KGF 735 "KGF 735"		FD
BASE	BC-210	2-8-81	0838 MST	Huntingdon,PA.	1635 Miles	
			33.70 MHz	KDP 395 NO ID		FD
BASE	BC-210	2-8-81	0848 MST	Little Valley, N.Y.	1660 Miles	
			33.70 MHz	KGE 897 NO ID		FD
BASE	BC-210	2-8-81	0858 MHz	Meyersdale,PA.	1590 Miles	
			33.70 MHz	KCH 954 NO ID		FD
BASE	BC-210	2-8-81	0900 MST	N. Branford,CT.	1964 Miles	
			33.70 MHz	KDP 406 "KDP 406"		FD

BASE	BC-210	2-8-81	1435 MST	S. Dayton, N.Y.		1610 Miles
			33.70 MHz	KTA 870	"Station 81"	FD
BASE	BC-210	1-24-81	0951 MST	Cassandra,PA.		1635 Miles
			33.86 MHz	KSS 946	NO ID	FD
BASE	BC-210	1-24-81	1016 MST	Pleasant Hills,PA.		1590 Miles

	FROM CARL (NY-117):		39.82 MHz	KBY 477	"477"	PD
B/M	Regency Touch	1-29-81	1605 EST	Boise,Idaho		1790 Miles
			39.82 MHz	KEV 428	"428"	PD
B/M	Touch	1-29-81	1604 EST	Libby, MT.		1700 Miles
			39.82 MHz	KOB 651	"651"	PD
B/M	Touch	1-29-81	1606 EST	Ravalli Co., MT.		1650 Miles
			39.82 MHz	KOA 999	"999"	PD
B/M	Touch	1-29-81	1608 EST	Kalispell,MT.		1675 Miles
			39.82 MHz	KOG 986	"Gooding"	Sheriff
BASE	Touch	1-29-81	1621 EST	Gooding Co., MT.		1750 Miles
			39.42 MHz	KYU 834	"Madera"	Sheriff
B/M	Touch	1-11-81	1618 EST	Madera Co.,(Big Creek)		CA 2085 Miles
			39.98 MHz	WCT 338	"Auburn"	Sheriff
B/M	Touch	1-27-81	1555 EST	Placer Co.,(Auburn)		CA. 2100 Miles
			39.80 MHz	KUN 432	NO ID	Sheriff
B/M	Touch	1-11-81	1234 EST	Fresno CO.,(Aubury)		CA 2075 Miles
			39.60 MHz	KMA 890	NO ID	State PD
BASE	Touch	1-11-81	1641 EST	San Quentin, CAL.		2075 Miles
			39.24 MHz	KMA 224	"Marin"	Sheriff
B/M	Touch	1-27-81	1715 EST	Marin Co., CAL.		2150 Miles
			39.44 MHz	KMA 861	"San Anselmo"	PD
B/M	Touch	1-24-81	1554 EST	San Anselmo, CAL.		2175 Miles
			37.42 MHz	KDB 900	"Central"	Sheriff
B/M	Touch	1-24-81	1600 EST	El Dorada Co, CAL.		2090 Miles
			39.88 MHz	KOS 722	"722"	Sheriff
B/M	Touch	1-29-81	1709 EST	Missoula,MT.		1685 Miles
			39.62 MHz	KOS 999	"999"	PD
B/M	Touch	1-29-81	1706 EST	Kalispell,MT		1675 Miles
			39.98 MHz	KMK 992	NO ID	LG
B/M	Touch	1-29-81	1742 EST	Newberg DPW,Oregon		2075 Miles
			39.66 MHz	KKQ 706	NO ID	PD
B/M	Touch	1-29-81	1749 EST	Sonoma Co.,(Santa Rosa)		CA
			39.76 MHz	NO CALL	"Nevada Co."	Sheriff
B/M	Touch	1-11-81	1354 EST	Nevada City,CA.		2075 Miles
			39.10 MHz	KOT 216	"216"	PD
B/M	Touch	1-11-81	1359 EST	Norco,CA.		2050 Miles
			39.04 MHz	KLM 503	"503"	State PD
BASE	Touch	1-29-81	1821 EST	Chino,CA.		2065 Miles
			39.92 MHz	KMA 376	"Control 17"	Sheriff
BASE	Touch	1-29-81	1753 EST	San Jose,CA.		2150 Miles
			39.52 MHz	KMA 224	"Control"	Sheriff
B/M	Touch	1-29-81	1831 EST	Marin Co., CA.		2175 Miles
			42.34 MHz	KMH 995	"CHP-Bishop"	State PD
BASE	Touch	1-29-81	1103 EST	Bishop,CA.		2000 Miles
			39.70 MHz	NO CALL	"Apple Jack"	SERVICE??
B/M	Touch	2-1-81	1138 EST	US Forces,GERMANY (?)		
(Editor Notes: Carl states times mentioned were six hours ahead of EST)						
			39.86 MHz	WBC 418	"Downieville"	Sheriff
B/M	Touch	1-27-81	1725 EST	Sierre Co,(Downieville)		CA
			39.74 MHz	KOB 246	"Spokane"	PD
B/M	Touch	1-28-81	1600 EST	Spokane,Wash.		1800 Miles
			39.68 MHz	WBC 411	"Placer"	Sheriff
B/M	Touch	1-11-81	1259 EST	Tahoe City,CA.		2200 Miles
			39.80 MHz	KOG 907	"907"	Sheriff
B/M	Touch	1-11-81	1216 EST	Silver Bow Co,MT		1625 Miles
			39.88 MHz	KTX 799	"799"	Sheriff
B/M	Touch	1-11-81	1226 EST	Gallatin Co,(Bozeman)		MT 1575 Miles
			39.82 MHz	KOH 267	"Power"	Sheriff

LOW BAND SKIP CONTINUED

BASE	Touch	1-11-81	1159 EST	Power Co,(Paps Mtn)ID	1650 Miles
		39.82 MHz	KOA 766	"Superior"	Sheriff
BASE	Touch	1-29-81	1625 EST	Mineral Co,(Superior) MT	1725 Miles

	FROM GARY (ILL-073):	33.16 MHz	NO CALL OR ID GIVEN		TAXI
B/M	BC-250	1-07-81	2214 CST	New York City	809 Miles

(Can anyone help tell name of this taxi company?)

		33.48 MHz	NO CALL OR ID GIVEN		FIRE
BASE	BC-300	1-06-81	1312 CST	Contra Costa Co., CA.	1688 Miles
		33.70 MHz	NO CALL	"OCD From Boat 1"	FIRE
B/M	BC-300	1-04-81	1339 CST	Los Angeles,CA.	1592 Miles
		33.78 MHz	KCA 695	"KCA 695"	FIRE
BASE	BC-300	1-01-81	2353 CST	Manchester, N.H.	944 Miles
		33.82 MHz	KEG 663	"Metuchen 1st Aid"	FIRE
BASE	BC-300	1-02-81	0003 CST	Metuchen Borough,N.J.	779 Miles
		33.82 MHz	KDQ 223	"KDQ 223"	FIRE
BASE	BC-300	1-02-81	0046 CST	E. Brunswick,N.J.	779 Miles
		33.82 MHz	NO CALL	"OCD-Rescue 28"	FIRE
B/M	BC-300	1-02-81	1118 CST	Los Angeles,CA.	1592 Miles
		33.86 MHz	KGF 801	"KGF 801"	FIRE
BASE	BC-300	1-01-81	2400 CST	Montrose,PA.	713 Miles
		33.90 MHz	KRE 417	"York Ambulance"	FIRE
BASE	BC-250	1-07-81	2226 CST	York(York Co),PA.	670 Miles
		33.94 MHz	KCD 390	"Boyertown Base"	FIRE
BASE	BC-300	1-12-81	1100 CST	Boyertown Borough,PA.	724 Miles
		35.26 MHz	CH.-ZO	"Seattle Mobile Clear"	Phone
BASE	BC-250	1-11-81	1441 CST	Seattle,WASH.	1670 Miles
		35.38 MHz	CH.-ZM	"San Diego Mobile"	Phone
BASE	BC-250	1-03-81	1319 CST	San Diego,CA.	1566 Miles
		35.38 MHz	CH.-ZM	"Los Angeles Mobile"	Phone
BASE	BC-250	1-03-81	1324 CST	Los Angeles,CA.	1592 Miles
		35.46 MHz	CH.-ZY	"Los Angeles Mobile"	Phone
BASE	BC-250	1-03-81	1316 CST	Los Angeles,CA.	1592 Miles
		35.46 MHz	CH.-ZY	"Oakland Mobile"	Phone
BASE	BC-250	1-08-81	1626 CST	Oakland,CA.	1696 Miles

(Editor's Comments: On the preceding logs for Mobile Telephones, Gary listed these as B/M. However, it is in my opinion that these can only be considered a Base or at best Repeater output, since the actual mobiles are usually inputted in the 43 MHz band. I would appreciate membership comment if you feel the same way or if they should be indicated as B/M.)

		37.14 MHz	KDZ 358	"KDZ 358"	Police
B/M	BC-250	1-11-81	1144 CST	Los Angeles,CA.	1592 Miles
		37.10 MHz	KYF 237	"237 Clear at 1040"	L.GOVT.
B/M	BC-200	1-14-81	1240 CST	Marin Co., CA.	1723 Miles
		37.22 MHz	NO CALL	"Charlie 128"	POLICE
B/M	BC-300	1-14-81	1153 CST	Los Angeles,CA.	1592 Miles
		37.42 MHz	KDB 90	"David 2 or 3X8 Central"	PD
B/M	BC-300	1-14-81	1230 CST	South Lake Tahoe,CA.	1575 Miles
		39.24 MHz	NO CALL	"Control to Adam 68"	POLICE
B/M	BC-200	1-14-81	1243 CST	Marin Co, CA.	1723 Miles

Gary would appreciate some HELP for the following mystery stations;

		30.76 MHz	NO CALL OR ID		(SEE BELOW)
B/M	BC-300	1-08-81	1450 CST	Possibly in CAL.	

(Xmission pertained to spotters on ground to spray a beet field by plane. HELP!)

		30.76 MHz	NO CALL OR ID		(SEE BELOW)
B/M	BC-300	1-08-81	1458 MHz	Los Angeles or San Diego	

(Xmission was in regard to a towing firm. Definitely in CAL.)

		31.72 MHz	KSO 718	"Fairfield Court House"	SERV?
B/M	BC-300	1-08-81	1515 CST	In or near Fairfield,CA.	(HELP)

Whew! What a list! Guess I was dead wrong about the conditions falling downhill in the March newsletter. It's alive and well and living in the F2. So, if you've logged a few, as Johnny Olsen would say (well...almost!)..... Come on and senddd it in!!!

Business, Etc.

Chuck Gysi, Editor

This column is for reporting frequency and radio system information for the following varied services: business, forest products, petroleum industry, special industrial, manufacturers, news media (behind-the-scenes radio, TV, and newspaper), motion picture industry, security (private patrol, detective agencies, campus security and police, amusement park and stadium security, shapping center and mall security, plant/business/hotel security, etc.), General Mobile Radio Service (GMRS), Mobile Phone/RCC and paging, trucking firms, bus lines, taxi cabs, tow trucks, utility companies (private and municipal water, power, electric, gas, telephone, etc.), and all school and college related frequencies. Send information and questions pertaining to the radio services covered in this column to: Chuck Gysi, P.O. Box 216, Willow Grove, PA 19090.

Many of the contributions to this month's column are from Rick Prelinger (NY-??? and ex-CA-SF-002). He has been collating the information from FCC microfiche license files.

News Media/Film

BIRMINGHAM NEWS MEDIA

From David Beck (AL-001):

161.760 WSGN Radio
450.0875 WVTM-TV Ch. 13 (repeater)
450.250 WSGN Radio reporters
450.650 WBRC-TV Ch. 6 (repeater)
455.050 WERC Radio
464.600 Birmingham News

Business

WASHINGTON AREA RADIO SHOPS

From Rick Prelinger:

461.7ØØ	KRG567	GE (DC)
462.65Ø	KAB9481	MOTOROLA (DC)
464.2ØØ	KYZ41Ø	MOTOROLA C & E (DC)
495.6625	KNQ432	GE (DC)
851.Ø125	KWH948	MOTOROLA C & E (DC)
33.14	KO4394	GE (DC)
461.425	WRC2Ø2	MOBILE RADIO COMMUNICATIONS (FALLS CHURCH, VA)
464.Ø75	KQZ431	GE (SILVER SPRING, MD)
464.875	KUW263	GE RADIO (ROCKVILLE, MD)
495.5625	KNQ224	BUSINESS RADIO COMM. (SILVER SPRING, MD)
151.925	KRW736/KWY835	ELECTRONIC TECHNICAL ... (ALEXANDRIA, VA)
151.925	KYE817	DE LEUW, CATHER & ASSOC. (ALEX, VA) (CONSULTING ENGRS.)
462.125	KXW527	RCA CORP. (ALEXANDRIA)
851.4875	WRE47Ø	RCA CORP. (BAILEYS CROSSROADS)
461.425	WRC2Ø2	MOBILE RADIO COMMUNICATIONS(FALLS CHURCH, VA)
462.65Ø	KAB2Ø55	MOTOROLA (FALLS CHURCH, VA)
495.7125	KYC491	COMMUNITY COMMUNICATIONS (FALLS CHURCH, VA)
464.775	KZT314	RCA CORP. (SPRINGFIELD, VA)

CONNECTICUT BUSINESSES

From Rick Prelinger:

151.865	KXS932	Travelers Insurance (Avon)
154.625	KVV373	CBS Publications (Greenwich)
151.745	KJY601	Hartford Fire Insurance (Hartford) (also KSW200)
461.575	KLP713	Aetna Life & Casualty (Hartford)

461.725	KQM499	Phoenix Mutual Life (Hartford)
463.225	KRH878	Hartford Fire Insurance (Hartford)
464.425	KTE876	Hartford Insurance Group (Hartford)
157.740	KVK705	First New Haven Nat'l Bank (New Haven)
464.925	KXT210	Blue Cross of Connecticut (North Haven)
463.950	KFC828	First Federal Savings & Loan (Seymour)
154.515	KVC914	GT&E (Stamford)
462.250	WXU682	Xerox (Stamford)

Motor Carrier

SAN FRANCISCO TRANSPORTATION

From Rick Prelinger:

44.50	KFX 770	Gray Line
154.515	KTW 243	SFO Airporter (airport buses)
464.525	KCO 939	San Francisco Van Co-op
154.515	WXQ 714	SFO Airporter/San Bruno

WASHINGTON TOURIST BUSES

From Rick Prelinger:

851.4875	KBT 994	Blue Lines Sightseeing/Baileys Crossroads, VA
462.000	WXJ 270	White House Sightseeing/Silver Spring, MD

Mobile Phone/RCC

RCC T-BAND CHANNELS OPEN IN CHICAGO

From several sources:

The FCC apparently has opened up the T-band UHF assignments for radio common carrier (RCC) service in the Chicago area, according to several reports. The 24 channels, from 470.0125 to 470.2875 and 476.0125 to 476.2875, have been assigned to Radio Communications Corp. The firm's subsidiary, Metropolitan Mobile Telephone Co., expects to have its system on the air by the time you receive this newsletter. The system has room for about 1,400 users, almost 500 more customers than Bell Telephone has on its current 16 channels as Illinois Bell.

The system will use 225-watt transmitters on top the IBM Building in Chicago. Thirty-mile range is expected. The units are manufactured by Harris Corp. and cost $3,400 apiece. Service will cost $42.50 monthly for 80 minutes of air time with additional time costing 30 cents a minute.

NEXT MONTH: What is Chicago's 800-MHz AMPS mobile phone system about?

Utility

PART XIV--LOS ANGELES CITY WATER AND POWER SYSTEM

Green Frequency Operations

The green frequency, 48.36 MHz, has been assigned to West Los Angeles and Harbor area power operations. It also is used by communication section and security personnel as a secondary operating frequency. The green frequency also is used for short-range operations in the Boulder City area, purple-green being used for long-range operations, and for short-range communications of power system units along the DC Interie and Victorville-McCullough transmission line.

Mobile units with green frequency capability may communicate with: "Radio," Radio Telegraph Office-General Office Building; "Harbor," Electric trouble, Harbor; "West LA," Electric trouble,

OH No. 6; "Load Dispatcher," System load dispatcher, Boyleston, contacted through West LA; "Shop," Communications shop, LA, contacted through Radio Telegraph Office; "Base," Communications office, LA, contacted through Radio Telegraph Office; "Wilmington," Receiving station "C"; "Scattergood," Scattergood steam plant; "Haynes," Haynes steam plant; "Patrol," transmission and trouble, Boyleston; "Dewap One," Special agents' office, General Office Building; and "Security Nine," Security office, General Office Building.

Outside the Los Angeles area, radio communications are available using the green frequency in and around Boulder City, Nevada, Bishop, Cedarville, Power Plants No. 1 and No. 2 and the Victorville switching station.

Base stations communicating on the green frequency do so through the following transmitters: Cedarville KQL 598, Bishop KLY 391, Boulder City KLI 423, Victorville switching station WYD 362, Power Plant No. 1 KSO 787, Power Plant No. 2 KIY 486, Lookout Mountain KME 488, Receiving Station "C" KMD 871, Scattergood steam plant KMK 973, and Haynes steam plant KCW 538.

Base station operators using transmitters other than Lookout Mountain (KME 488) must identify the transmitter at the end of each series of transmissions.

The Los Angeles Radio Telegraph Office is responsible for identifying the Lookout Mountain transmitter.

Mobile units operating on the green frequency are not required to transmit the FCC-assigned call sign when clearing the frequency. They must, however, transmit their unit designator once during each series of transmissions.

BAY AREA TELEPHONE MAINTENANCE

From Rick Prelinger:

151.985	KCQ373	Pacific Telephone (San Francisco)
451.325	KOF211	Pacific Telephone (San Francisco)
484.1625	KXW365	Pacific Telephone (Berkeley) also KXW366
451.325	KOF211	Pacific Telephone (Oakland)
451.400	KDU765	Pacific Telephone (Oakland) also KDU766

Security

WASHINGTON AREA PRIVATE SECURITY AND DETECTIVES

From Rick Prelinger:

31.2Ø	KTD74Ø	PINKERTONS, INC. (DC)
31.24	KLZ445	STATEWIDE SECURITY (DC)
151.745	KJU721	WATERGATE SOUTH, INC. (DC)
151.745	KRF857	WATERGATE IMPROVEMENTS (DC) (ALSO 151.775)
151.865	KYE571	SUBURBAN INVESTIGATORS (DC)
151.955	KYN544	INTL. BANK FOR RECONSTRUCTION (DC)
46Ø.95Ø	KGG395	ADT (WASHINGTON, DC)
461.4ØØ	KRF285	ADMIRAL SECURITY SERVICE (DC)
461.675	KLW691	BURNS INT'L SECURITY (DC)
461.675	WZE245	ADMIRAL SECURITY (DC)
462.1ØØ	KZQ2Ø5	GUARDIAN SECURITY AGENCY (DC)
463.5ØØ	KAY772	METROPOLITAN DETECTIVE (DC)
463.6ØØ	KNM456	HILLS CAPITOL SECURITY (DC)
463.95Ø	WYF77Ø	METRO PROTECTIVE SERVICE (DC)
464.325	KYL337	WACKENHUT CORP. (DC)
464.525	KXT587	L'ENFANT PLAZA PROPERTIES (DC)
464.625	KAR374	NATIONAL DETECTIVE AGENCY (DC)
464.825	KXW614	L'ENFANT PLAZA CORP. (DC)
464.875	KLB399	INTERSTATE INTELLIGENCE (DC)
154.57Ø	KT3459	ELECTRICAL SECURITY (DC)
154.6ØØ	KT3699	GUARDIAN SECURITY AGENCY (DC)
31.16	KO9121	WATERGATE WEST, INC. (DC)

Business, Etc. continued

151.625	KA391Ø9	PROTECTIVE SECURITY (DC)
151.865	KA47248	EAGLE SECURITY (DC)
151.865	KK548Ø	GLOBE SECURITY SYSTEMS (DC)
154.57Ø	KO5562	PINKERTONS (DC)
154.6ØØ	KN4456	HALIFAX SECURITY SERVICE (DC)
461.4ØØ	KJ9999	ADMIRAL SECURITY SERVICE (DC)
464.75Ø	KIW256	SIMMONS INVESTIGATIVE (ARLINGTON, VA)
461.Ø75	WXB696	STATE SIDE DETECTIVE (FALLS CHURCH, VA)
461.775	WRE7Ø5	ECCLES SECURITY AGENCY (SILVER SPRING, MD)
44.4Ø	KJK651	BRINKS, INC. (BETHESDA, MD)
461.975	KCG422	HOWARD SECURITY AGENCY (BETHESDA, MD)
463.625	KST293	HONDO SECURITY AGENCY (BETHESDA, MD)
		METROPOLITAN DETECTIVE (BETHESDA, MD)
151.865	KLO775	SUBURBAN INVESTIGATORS (CHEVERLY, MD)
461.ØØØ	KIQ242	ELECTRO PROTECTIVE (ROCKVILLE, MD)
463.375	KZM3Ø9	CRIME CONTROL, INC. (ROCKVILLE, MD)
461.275	KWY68Ø	MC GUIRE SECURITY (SILVER SPRING, MD)
463.425	KSU358	MC CRACKEN SECURITY (SILVER SPRING, MD)
463.425	WYU334	LEONARD SECURITY (SILVER SPRING, MD)
495.5625	KB5652	MARYLAND CAPITOL SECURITY (SILVER SPRING, MD)
461.25Ø	KKD623	SUBURBAN INVESTIGATORS (WHEATON, MD)
151.685	WRJ98Ø	NATIONAL PROTECTIVE (ALEXANDRIA, VA)
154.515	KKD6Ø2	AREA SAFE & LOCK SERVICE (ALEXANDRIA, VA)
461.55Ø	WXE21Ø/WXV539	ATLANTIC SECURITY AGENCY (ALEXANDRIA)
151.715	WXG996	CAROLINA SECURITY PATROL (ARLINGTON, VA)
46Ø.925	KZE913	HONEYWELL COMMUNICATIONS &
		MARRIOTT SECURITY SYSTEMS (ARLINGTON, VA)
46Ø.975	KAR525	BAKER PROTECTIVE SERVICES (ARLINGTON, VA)
461.55Ø	WXE211	ATLANTIC SECURITY AGENCY (ARLINGTON, VA)
464.25Ø	KAD581	INVESTIGATIONS, INC. (ARLINGTON, VA)
464.65Ø	KQX523	WELLS FARGO ARMORED (ARLINGTON, VA)
464.75Ø	KIW256	SIMMONS INVESTIGATIVE (ARLINGTON, VA)
495.7125	KGE53Ø	MILLER PROTECTIVE SERVICES (ARLINGTON, VA)
463.35Ø	KZG624	TRI STATE CANINE CORP. (FAIRFAX, VA)
452.625	KTE411	PUROLATOR SERVICES (FALLS CHURCH, VA)
461.Ø75	WRK747	NORTHERN SECURITY PATROL (FALLS CHURCH, VA)
461.Ø75	WXB696	STATE SIDE DETECTIVE (FALLS CHURCH, VA)
461.125	KUW424	CENTRAL INVESTIGATIVE (FALLS CHURCH, VA)
495.7125	KNR342	STATE SIDE DETECTIVE (FALLS CHURCH, VA)
495.9625	KNQ227	ACTION INVESTIGATIONS (FALLS CHURCH, VA)
496.6875	KNQ437	HOME SECURITY SERVICE (FALLS CHURCH, VA)
461.125	KUW423	CENTRAL INVESTIGATIVE (MC LEAN, VA)
151.715	KUV442	INVESTIGATIVE SERVICES (OCCOQUAN, VA)
151.685	KMH445	SECURITY CONCEPTS (RESTON, VA)

School

WASHINGTON AREA SCHOOLS AND UNIVERSITIES

From Rick Prelinger:

3Ø.92	KUV746	HOWARD UNIVERSITY (DC)
151.685	KJI224/KRE8Ø4	GEORGETOWN UNIVERSITY (DC)
151.715	KJQ813	GEORGE WASHINGTON UNIVERSITY (DC)
151.715	KWB2Ø1	WOODROW WILSON H.S. (DC)
151.715	WSC837	KRAMER J.H.S. (DC)
151.715	WYW5Ø1	DUNBAR SENIOR H.S. (DC)
151.715	WZK955	BALLOU SENIOR H.S. (DC)
151.715	WZP267	SPINGARN H.S. (DC)
151.745	KAY861	GALLAUDET COLLEGE (DC)
151.745	KJO549	AMERICAN UNIVERSITY (DC)
151.835	KYE675	HOWARD UNIVERSITY (DC)
151.865	WYP441	GEORGE WASHINGTON UNIVERSITY (DC)
151.895	KWW8Ø5	JOHNS HOPKINS UNIVERSITY (DC)
151.895	WZY851	AMERICAN UNIVERSITY (DC)

151.955	KKO963	GEORGETOWN UNIVERSITY (DC)
154.54Ø	KRD874	GALLAUDET COLLEGE (DC)
154.6ØØ	KJQ813	GEORGE WASHINGTON UNIVERSITY (DC)
462.125	KDO245	KENDALL ELEMENTARY SCHOOL (DC)
462.575	KAA8411	HOWARD UNIVERSITY (DC)
464.575	KDH222	CATHOLIC UNIVERSITY (DC)
464.675	WYN529	HOWARD UNIVERSITY (DC)
464.875	KKS386	UNIVERSITY OF THE DI.... ???
464.925	WRJ869	GEORGE WASHINGTON UNIVERSITY (DC)
467.775	KT9849	GEORGETOWN UNIV. (DC) (ALSO 467.825, 467.85Ø, AND 467.9ØØ)
469.4375	KA3Ø66Ø	GEORGE WASHINGTON UNIV. (DC)
154.515	KRX9Ø4	COLUMBIA UNION COLLEGE (TAKOMA PARK, MD)
464.525	WSH712	ALEXANDRIA (VA) CITY SCHOOLS
464.675	WSC66Ø	FAIRFAX COUNTY PUBLIC SCHOOLS (VA)

Freak Freqs

WALT DISNEY WORLD UPDATE

From George Makrauer (OH-084):

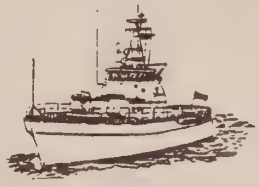
To add to the February list of Walt Disney World frequencies in Orlando, Fla., we have confirmed 467.575 to be a frequency for monorail train-to-train and to train dispatchers. In addition, we have monitored a considerable amount of service activity on 467.250 of a general nature.

SPECIAL EVENTS WALKIES

From Walt Baranger (CA-OR-129):

Western Walkie-Talkie in Santa Ana, CA, is authorized on 154.570, 154.600, 464.3125 and 464.8125. The firm is a major Southern California rental company. Many special events in Orange and Los Angeles counties use their radio frequencies.

Also From WALT BARANGER'(CA-OR-129): Woodbridge Lifeguards in Irvine, Calif., are on 464.3125.



VHF Marine

Rod O'Connor, Editor

Send information, articles, frequencies and how they are used, and questions that relate to private, commercial, and Coast Guard VHF maritime and inland waterways radio communications to: Rod O'Connor, USGC Group, 259 High Street, South Portland, Maine 04106.

Updated VHF channels listing for your log

According to the federal Department of Communications, there are now over 10,000 licensed marine radio operators in B.C. waters, and probably there are three times that number aboard vessels who in fact use the shipboard sets.

We are therefore pleased to be able to provide an updated list of B.C. Marine VHF channels in a form small enough to clip out and paste into your radio log or your yacht's log if you don't keep a separate one for the radio.

The DOC notes that at present, using the wrong channels for inter-ship communications is 'causing serious interference to communications related to the safe movement of shipping in congested areas.' So, noting this revised, updated list of channels

could be highly useful.

At the same time, while users should try to transmit and receive only on the channels allocated to them (for example, noncommercial pleasure craft) 'there is no objection to selecting another channel provided that interference is not caused to the primary user...'

Another problem area is incorrect use of channel 16, the distress, safety and calling channel. After contact on 16, users should immediately agree to a different channel and switch to it. Otherwise, 16 should be used for distress (Mayday and Pan))calls only.

Port operations are being interferred with by using the powerful, usually 25 watt transmit setting unnecessarily. In port, the one watt setting is almost always sufficient and is often enough even out of port.

Canadian West Coast FM Marine VHF Channels

Channel	Frequency	Nature of Service and Primary User
Distress, Safety and Calling		
16	156.8	Intership/Shipshore Distress and Calling
Intership		
6	156.3	Intership — Domestic and Foreign
Commercial Operations		
5A	156.25	Intership/Shipshore — Fishing Industry
7A	156.35	Intership/Shipshore — Towboat Industry
8	156.4	Intership only
9	156.45	Intership/Shipshore
10	156.5	Intership/Shipshore — Towboat Industry
18A	156.9	Intership/Shipshore — Towboat Industry
19A	156.95	Intership/Shipshore — Used by Cdn. Coast Guard
67	156.375	Intership/Shipshore
78	156.625	Intership only
73	156.675	Intership/Shipshore
78A	156.925	Intership/Shipshore — Fishing Industry
79A	156.975	Intership/Shipshore — Fishing Industry
80A	157.025	Intership/Shipshore
Non-Commercial (Pleasure Craft)		
9	156.45	Intership/Shipshore
67	156.375	Intership/Shipshore
68	156.425	Intership/Shipshore
69	156.475	Intership/Shipshore
70	156.525	Intership only
72	156.625	Intership only
73	156.675	Intership/Shipshore
Navigation (Vessel Traffic Management)		
11	156.55	VTM — Ship Movement
12	156.6	VTM — Ship Movement Vancouver Traffic
13	156.65	VTM — Ship Movement
14	156.7	VTM — Ship Movement
71	156.575	VTM — Ship Movement
74	156.725	VTM — Ship Movement
Canadian Coast Guard (CCG)		
22A	157.1	IS/SS for Non CCG Stations to work CCG Stations

Channel	Frequency		Nature of Service and Primary User
Public Correspondence			
	Frequency		
	Ship TX (Transmit)	Ship RX (Receive)	
23	157.15	161.75	Shipshore — Marine Telephone
24	157.2	161.8	Shipshore — Marine Telephone
25	157.25	161.85	Shipshore — Marine Telephone
26	157.3	161.9	Shipshore — Marine Telephone
27	157.35	161.95	Shipshore — Marine Telephone
28	157.4	162.0	Shipshore — Marine Telephone
84	157.225	161.825	Shipshore — Marine Telephone
85	157.275	161.875	Shipshore — Marine Telephone
86	157.325	161.925	Shipshore — Marine Telephone
87	157.375	161.975	Shipshore — Marine Telephone
88	157.425	162.025	Shipshore — Marine Telephone
Weather Broadcast Service			
21B	Receive only	161.65	M.O.T. Marine Weather
WX1	Receive only	162.55	M.O.T. Marine Weather
WX2	Receive only	162.4	Dept. of Environment General Weather
WX3	Receive only	162.475	U.S. Govt Weather
WX4	Receive only	162.55	U.S. Govt Weather
The following are restricted channels for specifically authorized stations only			
Canadian Coast Guard (CCG)			
21A	157.05		Intership/Shipshore — CCG stations only
81A	157.075		Intership only — CCG Anti-Pollution
82A	157.125		Intership/Shipshore — CCG stations only
83	157.175	161.775	Intership/Shipshore — CCG stations only
Port Operations — Pacific Pilotage Authority			
17	156.85		Intership/Shipshore — Vessel Docking/Manoeuver
77	156.875		Intership only — Vessel Docking/Manoeuvers
20	157.0	161.6	Shipshore only — where authorized
Government Operations			
15	156.75		Department of Environment only
Towboat			
85A	156.275		Seaspan — Authorized stations only
Reserved			
86A	156.325		Reserved

The above list furnished by Rob (CAN-009), Canadian Column Editor for the benefit of all Canadian Marine listeners. Next month I will list the numerous British Columbia Marine Operator channels which Rob has also furnished. The above chart is from the Nov. 1980 issue of PACIFIC YACHTING.

The only other correspondence received since the first of the year has been from Gary (IL-073) who advises that the Saint Louis Missouri Marine Operator works on VHF Channel 25, 161.850 mhz., and the Marine Operator at Beardstown, Illinois works traffic on VHF Channel 26, 161.900 mhz.

Please send it any other information. With the upcoming summer season not too far off, now is the time to start gearing up.

COMMUNICATIONS PROFILE

RCMA, P.O. Box 216, Willow Grove, PA 19090

This column is for special projects that explain various radio systems in detail. Frequencies and radio codes of not only municipal agencies and certain federal government agencies may be listed, but also large businesses and corporations. The contribution must be lengthy enough that publishing it in one of the regular columns would not be possible due to length. If you would like to submit a report such as the one below, please follow No. 8 in the inside front cover of the newsletter.

The following report on St. Louis metro area ambulance dispatching was submitted by David (MO-009).

ST LOUIS, MISSOURI: METRO AREA AMBULANCE DISPATCHING

This map, and the heterogenious collection of tables which follow, constitute an attempt to convey the details of radio communications between ambulances and their dispatching agencies in the City of St. Louis, in the Missouri counties of St. Louis, St. Charles, Jefferson and Franklin, and in the Illinois counties of Madison, St. Clair and Clinton, a region for which the Hospital Association of Metropolitan St. Louis publishes an Emergency Radio Communication Directory. The information presented here pertains to the radio traffic required to get the ambulance to the patient, and both to the appropriate hospital, and to ascertain the location and service status of the ambulance at any time. What is usually called EMS (Emergency Medical Service) radio pertains chiefly to communication of medical information from ambulance to hospital, in the form of voice or EKG telemetry, and will be covered in detail in the next installment in this series. For an introduction to EMS radio in the St. Louis area, see Mike Redman's Public Safety Central in the October 1979 RCMA Newsletter.

In this region, all ambulances carry HEAR1 and HEAR2 (Table VII) for VHF communications with hospitals. In ambulances without other radios, all communications, including medical data, will usually be found on HEAR1. In addition to the two HEAR channels, ambulances in St. Louis and St. Charles Counties and in St. Louis City have at least the first 8 UHF telemetry channels and, in newer installations, the UHF dispatch channels MED-9 and MED-10 as well. Some of the UHF-equipped ambulances, such as those in University City have vehicular repeaters to boost the power of the portable's signal on its way to the hospital (Table II). For thorough treatments of EMS radio, see Emergency Medical Services Communications System Technical Planning Guide (U.S Government Printing Office, Stock No. 003-000-00547-0, $5.50) and the IEEE Transaction on Vehicular Technology, vol. VT-28, November 1979 (IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854, $5.00)

Regarding University City's vehicular repeater system (Table II), note that the four MED SUB channels, 458.025, 458.075, 458.125 and 458.175 are used twice for portable transmissions, with different MED receive frequencies providing 10 full-duplex, repeatered channels using only 24 frequencies, rather than 30 or 40. A multiplexing feature permits the simultaneous transmission of voice and tone-modulated EKG. Base Repeaters and Mobile Relays are not found among the UFH telemetry channels, since one two-frequency channel can accomodate only one repeater, and this is reserved for the ambulance. When this kind of system is in the repeat mode, you may hear both sides of the conversation on the mobile transmit frequency, such as 418.175 MHz. In addition to the UHF setup, each University City ambulance has 8 VHF channels (Table VIII) in a mix which might be considered typical for a municipal ambulance: municipal and mutual aid fire, municipal police and local government, and NLEEC (National Law Enforement Emergency Channel) Note also that the University City ambulances can communicate with St. Louis city ambulances. Many thanks to Administrative Chief

Shanahan and Paramedic Green who permitted me to poke around the ambulance to get this radio information.

In St. Louis County (Map, Table I)all emergency ambulance boundaries follow those of fire departments and protection districts and most ambulances are provided and dispatched by fire protection entities. North Central Fire Alarm System dispatches ambulances for 9 service areas, Central County Alarm Service for 7 areas and South County Fire Alarm for 4 areas including the North Jefferson County Ambulance District. Ambulance dispatching is embedded in the operation of these three fire dispatching entities whose channel plans,10 signals and F codes are listed in Tables IX, X, XI, XII and XIII.

In St. Louis County areas not covered by municipal or fire protection district ambulances, emergency ambulance service is provided by the St. Louis County Department of Community Health and Medical Care (DOCHMC), whose ambulances are dispatched by the St. Louis County Police (Table V) on the appropriate precinct channel. The county police have, in addition, a control console (Table VI) for an EMS base station located at the County's Emergency Operating Center (EOC). Should centralized ambulance dispatching ever come to St. Louis County, this facility with both telephone- and cross-patching capabilities should serve an important role.

In many metropolitan areas, personnel at a central EMS dispatching center decide which ambulance with what level of licenced personnel should respond to a medical emergency. Then, when the ambulance requests radio contact with a hospital, the dispatching center decides which hospital and which VHF or UHF channel should be used. In such a system the distinction between Basic and Advance Life Support Vehicles, and between Mobile Emergency Medical Technicians (MEMTs) and MEMT-Paramedics,and how each functions in the system will apparent to the monitor listener and to the general public. As you may have guessed, such ideal circumstances do not prevail in the metropolitan St. Louis Area, presenting a person trying to make sense of the non-system with considerable difficulties.Fortunately, the individuals within each component understand how their part of the system works, and, somehow, an appropriate response to a medical emergency is generated. However, many area hospitals do not monitor the HEAR (Table VII) and UHF (Table II) channels,with the result that medical information must be passed on the routine fire and police channels, and thence by telephone to the emergency room. As Mike Gray, Missouri EMS Communication Coordinator put it,in effect, "Many hospitals do not take their radio systems seriously until they are confronted with the unannounced arrival in their emergency rooms of a large number patients from a disaster or other calamity, all requiring immediate treatment."

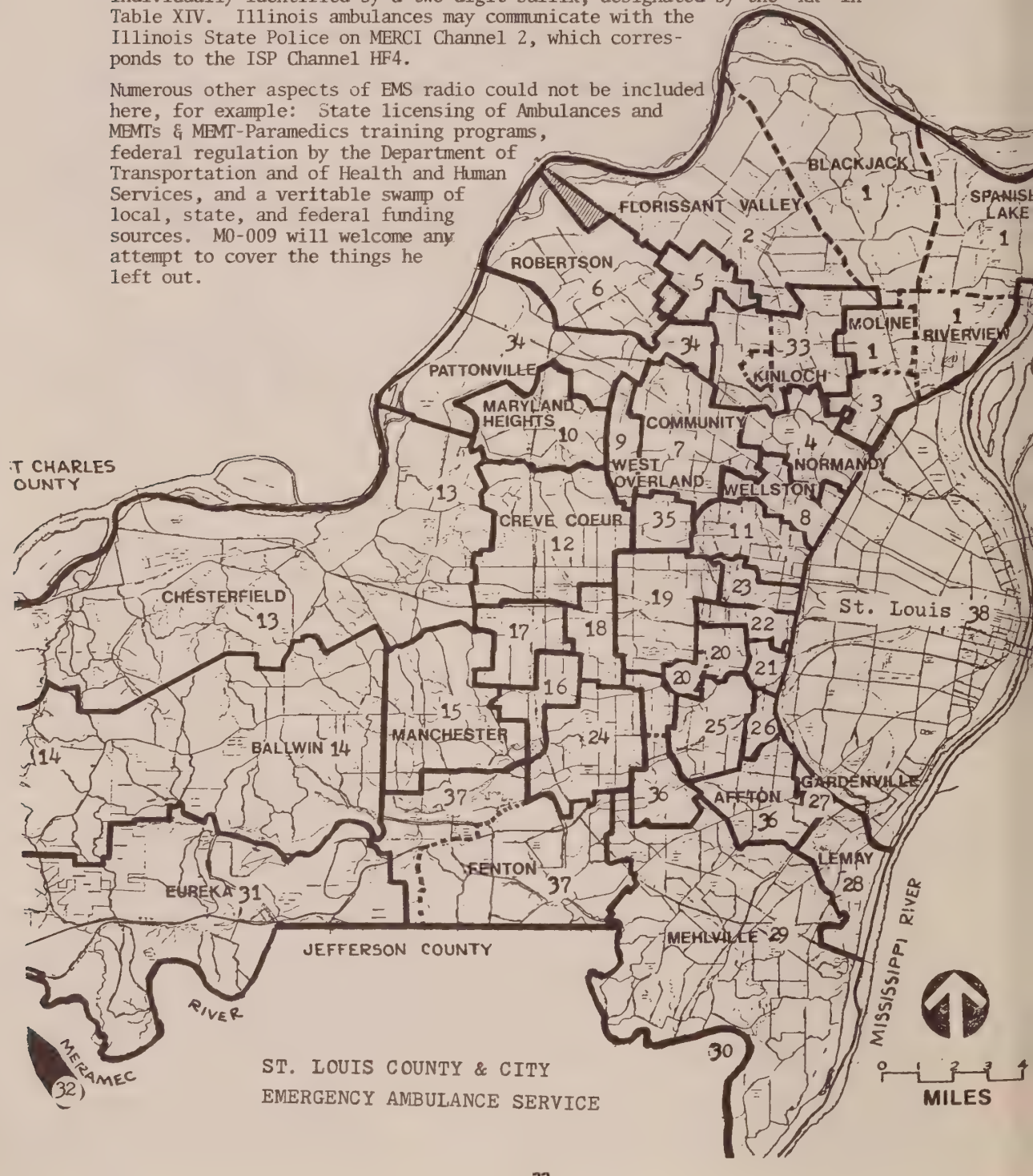
Supplementing the ambulances provided by government entities are nine Missouri-licensed ambulance services, used for the most part for the non-emergency transportation of patients. The exception is Pfitzinger, which is the primary emergency provider for Kirkwood. Patients, or victims, pronounced dead on the scene in St. Louis County are transported by one of the four contract ambulance services. Helicopter ambulance service is provided by St. Louis University's Medical Air Rescue Corps (MARC) which is supplemented by Fostair Helicopter Ambulance. Patients in souther Illinois are frequently transfered to St, Louis by the MERCI (Medical Emergency Radio Communications of Illinois) helicopter. Medical and dispatch traffic involving helicopters is usually found on HEAR1 (Table VII). Also, several aircraft charters companies based at Lambert field provide long-distance ambulance service, but are not considered ambulances under Missouri law. The services listed in Table IV have current radio licenses or advertize in the Yellow Pages, but their status as ambulance services in not clear.

The city of St. Louis operates an extensive emergency ambulance service and uses an unusual medical code which is listed in Table XV.

Emergency ambulance service in the Missouri counties of St. Charles, Franklin, and Jefferson is provided by ambulance districts (Table XIV) for which radio capabilities and dispatching arrangements are incompletely understoood by the writer,but are included here for the sake of completeness. However, each of these ambulances carry the HEAR1 channel,on which they are heard asking directions when they bring patients to St. Louis for treatment.

In Illinois, radio channels and unit numbers are assigned by the State under the MERCI system. Madison, St. Clair, and CLinton counties are in MERCI region 4, with unit prefixes of 4A, 4C, and 4D respectively (Table XIV). Ambulances are individually identified by a two-digit suffix, designated by the 'xx' in Table XIV. Illinois ambulances may communicate with the Illinois State Police on MERCI Channel 2, which corresponds to the ISP Channel HF4.

Numerous other aspects of EMS radio could not be included here, for example: State licensing of Ambulances and MEMTs & MEMT-Paramedics training programs, federal regulation by the Department of Transportation and of Health and Human Services, and a veritable swamp of local, state, and federal funding sources. MO-009 will welcome any attempt to cover the things he left out.



ST. LOUIS COUNTY & CITY
EMERGENCY AMBULANCE SERVICE

I ST. LOUIS CITY & COUNTY: EMERGENCY AMBULANCE DISPATCHING

MAP REF	AMBULANCE AREA/PROVIDER	UNIT ID	DISPATCHED BY	CHAN	BASE DISPATCH CHANNELS TRANSMIT/RECEIVE
1	Spanish Lake, Riverview Black Jack & Moline FPDs/ Christian Hosps. NE-NW	127 128 138 147 148 158 168	North Central Fire	F3* F4 MED9*	154.325/154.400 154.400/154.400 462.950/467.950
2	Florissant Valley FPD/ Christian Hosps. NE-NW	LSV	Florissant PD# Christian NW Hospital	F1* F2	453.225/458.225 453.325/458.325
3	Jennings FD/ Christian Hosps. NE-NW	118	North Central Fire Police cross-monitor	F3* F4 MED9*	154.325/154.400 154.400/154.400 462.950/467.950 155.550/154.400
4	Normandy FPD	96	North Central Fire	F3* F4 MED9*	154.325/154.400 154.400/154.400 462.950/467.950
5	Hazelwood FD	56 57	Hazelwood PD#	*	154.400/154.400
6	Robertson FPD	67	North Central Fire	F3* F4 MED9*	154.325/154.400 154.400/154.400 462.950/467.950
7	Community FPD	206 207	North Central Fire	F3* F4 MED9*	154.325/154.400 154.400/154.400 462.950/467.950
8	Wellston FPD/ Normandy Ost- eopathic Hosp.	216 217	North Central Fire	F3* F4 MED9*	154.325/154.400 154.400/154.400 462.950/467.950
9	West Overland FPD	247 248	North Central Fire	F3* F4 MED9*	154.325/154.400 154.400/154.400 462.950/477.950
10	Maryland Heights FPD	247 248	North Central Fire	F3* F4 MED9*	154 325/154.400 154.400/154.400 462.950/467.950
11	University City FD	256 257	Univ. City PD#	F1*	154.370/154.370
12	Creve Coeur FPD	286 287	Central Co. Fire	DISP* ADMIN	154.370/154.370 154.220/154.220
13	Chesterfield FPD	306 307	Central Co. Fire	DISP* ADMIN	154.370/154.370 154.220/154.220
14	Ballwin FPD	326 338 339	Central Co. Fire	DISP* ADMIN	154.370/154.370 154.220/154.200
15	Manchester FPD	346 347	Central Co. Fire	DISP* ADMIN	154.370/154.370 154.200/154.220

16	Des Peres Dept. Public Safety	357	Des Peres PD#	F1*	155.100 154.370
17	Town & Country/ Coverage shared by Des Peres, Frontenac, Creve Coeur & Manchester.	(286) (287) (346) (347) (357) (377)	Central Co. Fire	DISP* ADMIN	154.370 154.220
18	Frontenac FD	377	Central Co. Fire	DISP* ADMIN	154.370 154.220
19	Ladue FD	386	Ladue PD#		453.500R* 154.370
20	Brentwood & Rock Hill FDs	406 407	Brentwood PD#		154.370*
21	Maplewood FD	426	Maplewood PD#		154.370*
22	Richmond Hts FD	417	Richmonds Heights PD#		154.370*
23	Clayton FD	318	Clayton PD#		154.370*
24	Kirkwood FD/ Pfitzinger Amb. Service	837 838 839 466	Kirkwood PD#	Pfitz.* Pfitz. Kirkwood PD* Kirkwood FD*	154.515 151.835 155.250 154.370
25	Webster Groves	504	Webster Groves PD#	FIRE*	153.860
26	Shrewsbury	509	Webster Groves PD#	POLICE*	155.580
27	Gardenville FPD	705	South Co. Fire	F3* F1* AMB*	154.160 153.890 155.235
28	Lemay FPD	406	South Co. Fire	F3* F1* AMB*	154.160 153.890 155.235
29	Mehlville FPD	205 206	South Co. Fire	F3* F1* AMB*	154.160 153.890 155.235
30	High Ridge FPD/ N. Jefferson Co. Amb. Dist.	905 906	South Co. Fire	F3* F1* AMB* JEFFCO. FIRE	154.160 153.890 155.235 154.310
31	Eureka FPD	477 488	Central Co. Fire	DISP* ADMIN	154.370 154.220
32	Pacific FPD/ Meramec Amb. District		Pacific PD	AMB*	155.055
33	Kinloch & Berkeley FPDs/St. Louis County DOCHMC (Ferguson)	753	St. Louis Co. PD#	F2*	155.130
34	Lambert-St. Louis Airport & Pattonville FPD/ DOCHMC	752	St. Louis Co. PD#	F2*	155.130
35	Olivette FPD/ DOCHMC	755	St. Louis Co. PD#	F2*	155.130
36	Afton, Crestwood & Glendale/DOCHMC	757	St. Louis Co. PD#	F3*	154.845

37	Fenton & Valley Park FPDs/ DOCHMC	758	St. Louis Co. PD#	F5*	155.565
	DOCHMC Supervisors	750 751 759	St. Louis Co. PD	DOCHMC Channel Plan	
38	St. Louis City Ambulance Svc.	Medic 1 through Medic 20	Ambulance Svc.	F1* F2 F3	155.955 155.220 155.340

MOTOROLA APCOR MULTIPLEX-DUPLEX TELEMETRY WITH VEHICULAR REPEATER

II

UNIVERSITY CITY UHF CHANNEL PLAN

	PORTABLE		VEHICULAR REPEATER		HOSPITAL	
	TRANSMIT	RECEIVE	TRANSMIT	RECEIVE	TRANSMIT	RECEIVE
MED-1	458.025	468.000	468.000	458.025 463.000	463.000	468.000
MED-2	458.075	468.025	468.025	458.075 463.025	463.025	468.025
MED-3	458.125	468.050	468.050	458.125 463.050	463.050	468.050
MED-4	458.175	468.075	468.075	458.175 463.075	463.075	468.075
MED-5	458.025	468.100	468.100	458.025 463.100	463.100	468.100
MED-6	458.075	468.125	468.125	458.075 463.125	463.125	468.125
MED-7	458.125	468.150	468.150	458.125 463.150	463.150	468.150
MED-8	458.175	468.175	468.175	458.175 463.175	463.175	468.175
MED-9	458.175	467.950	467.950	458.175 462.950	462.950	467.950
MED-10	458.175	467.975	467.975	458.175 462.975	462.975	467.975

State-wide telemetry sub-audible tone: 192.8 Hz

ST. LOUIS CITY & COUNTY: PRIVATE AMBULANCE SERVICES (LICENSED)

III

AMBULANCE SERVICE	UNIT ID	DISPATCHED BY	CALL SIGN	BASE DISPATCH CHANELLS TRANSMIT/RECEIVE
A. Abbott@	800 - 810	A. Abbott	KMK409* KXH350	462.975/467.975 463.325/468.325R
Adams Service			No frequency listed	
Christian@ Hospital NE-NW	813 814 815	Christian NW	WXM708 KBJ932* KSK912	462.975/467.975 155.220/155.220 155.340/155.340
Gateway	811 812	South Co. Fire, Gateway	WYX293* KCL511 KCL511 KCL511	155.235/155.235 155.220/155.220 155.340/155.340 47.500/ 47.500

MARC Helicopter 100 Mile Radius St. Louis		St. Louis Univ. Med. Center	KVI559* AVCOM NLEEC	155.340/155.340 123.050/123.050 155.475/155.475
Guy-Mullen		Guy-Mullen	KAH738	47.620/ 47.620
Northwest@	828 829 830	Northwest	KYV719	154.515/154.515
Pfitzinger@	837 838 839	Pfitzinger	KWP529 KAB267 KAB954	154.515/154.515 155.250/155.250 155.580/155.580
White-Mullen		White-Mullen	KAH752 KAL554 KAG843	154.540/154.540 156.090/156.090 155.010/155.010

#Landline dispatch, radio acknowledgement *Used frequently
@Contract to St. Louis County

ST. LOUIS CITY & COUNTY: OTHER AMBULANCE SERVICES

IV

AMBULANCE SERVICE	UNIT ID	DISPATCHED BY	CALL SIGN	BASE DISATCH CHANNELS TRANSMIT/RECEIVE
A1 Ambulance Svc.			KTU273	155.175/155.175
Consolidated Svc.			KQU292	155.220/155.220
Douglas Amb. Svc.			KDU571	47.580/ 47.580
E&T Transportation			No frequency listed.	
Faith Amb. Scv.			KRZ202	155.220/155.220
Medical Care Amb. Svc			KWO280	47.540/ 47.540
Simmons Amb. Svc.			No frequency listed	
Suburban Amb. Svc.			KVZ583	47.500/ 47.500

CHANNEL PLAN, ST. LOUIS COUNTY DEPARTMENT OF COMMUNITY HEALTH AND MEDICAL CARE (DOCHMC) V

F1	154.875 MHz	KAA519	Pct. 1
F2	155.130	KAA519	2
F3	154.845	KAA519	3
F4	155.655	KAA519	4
F5	155.565	KAA519	5
F6	154.220	KSL265	HEAR2
F7	154.725	KAA519	Riot
F8	155.340	KSM855	HEAR1
F9	155.475	KAA519	NLEEC
MED1-MED8		KUQ645	

HEALTH EMERGENCY ADMINISTRATIVE RADIO CHANNELS (HEAR) VII

HEAR1* 155.340	Hosp.-Hosp.
HEAR2 155.220	Amb.-Hosp.
HEAR3 155.280	Regional Hosp.

ST. LOUIS COUNTY POLICE DEPARTMENT EMS DISASTER BASE (E.O.C) VI

HEAR1	155.340	WRA409
HEAR2	155.220	WRA409
HEAR3	155.280	WRA409
MED1-MED10		WRA409

UNIVERSITY CITY AMBULANCE VHF CHANNEL PLAN VIII

F1*	154.370	KJR350	Fire
F2	154.280	KJR351	Fire Mu. Aid
F3	156.210	KAA875	Police 1
F4	155.220		HEAR2
F5	155.340		HEAR1
F6	155.955		City Amb.
F7	155.475	KAA875	NLEEC
F8	154.100	KRK629	L. Gov't

CHANNEL PLAN, NORTH CENTRAL FIRE ALARM SYSTEM.(Mobile Tx/Rx) IX

T1	154.370/154.370	KBG256	Central Co. fire
T2	154.280/154.280	KBG256	Fire mutual aid
T3*	154.400/154.325	KBG256	Dispatch
T4*	154.400/154.400	KBG256	Fire call-back
	465.600/460.600R	KYY837	Adminstrative
	467.950/462.950*	KX0621	EMS call-back

NORTH CENTRAL FIRE FIRE ALARM 'F' CODES X

F1	House fire
F2	Commercial fire
F3	Ambulance call
F4	Weed fire
F5	Auto fire
F6	Bomb alert
F7	Miscellaneous fire

XI NORTH CENTRAL COUNTY FIRE ALARM 10 SIGNALS

10-1	Unable to copy	10-70	Fire
10-2	Signals good	10-71	In radio service on fire assignment
10-3	Will do as ordered	10-72	At scene
10-4	Message received	10-73	Standing by available for assignment
10-5	Relay message	10-74	Laying 2½ inch line, notify utilities
10-6	Busy, stand by	10-75	Using booster line
10-7	Out of radio service	10-76	Returning out of service
10-8	In radio service	10-77	Returning in service
10-9	Repeat	10-79	Report progress of fire
10-10	Subject to call by telephone	10-91	Too weak, talk closer to microphone
10-14	Correct time of alarm	10-92	Too loud, talk farther from microphone
10-21	Call by phone J1 When convenient J2 Right away	10-94	Give a test
10-50	Accident-J1 Minor, J2 Serious		
10-51	Wrecker needed		
10-52	Ambulance needed		

XII CENTRAL COUNTY FIRE ALARM CHANNEL PLAN

F1*	154.370	KAF919	Dispatch
F2	154.280	KAF919	Mutual aid
F3	154.220	KAF919	Administrative

XIII SOUTH COUNTY FIRE ALARM CHANNEL PLAN

F1*	153.890	KAK618	Call-back
F2	154.280	KAK618	Mu. Aid
F3*	154.160	KAK618	Dispatch
F4*	155.235	WYX293	Ambulance

XIV OUTSTATE MISSOURI AND DOWNSTATE ILLINOIS: EMERGENCY AMBULANCE DISPATCHING

COUNTY/AMBULANCE DISTRICT/PROVIDER	UNIT ID	DISPATCHED BY	CHAN	MOBILE DISPATCH CHANNELS TRANSMIT/RECEIVE	CALL SIGN
N. Jefferson Co. Ambulance Dist.	905 906	South Co. Fire Alarm	AMB*	155.235/155.235	WYX294
Jefferson/Big River Amb. Dist.				155.055/155.055	KAQ289
Jefferson/Rock Township Amb. Dist.,Arnold		Arnold PD		155.145/155.145	KUV145
Jefferson/Valle Amb. District			HEAR2 HEAR1*	155.220/155.220 155.340/155.340	
Jefferson/ J. Plattin Amb. District		Jefferson Mem. Hosp.		155.865/155.865	KOB718 KYY933
Jefferson/Mercy Ambulance & Oxygen Svc., Arnold				155.175/155.175	KUG895
St Charles Co. Amb. District		St. Charles Co. Amb.Dist.	F1* F2 F3 F4	155.940/155.940 155.160/155.160 155.835/153.920 155.340/155.340	KZ0390 KRS302 WBH987 KZ4029
Franklin/Meramec Valley Amb. District		Pacific		155.055/155.055	KWQ507
Franklin/Union Amb. District		Franklin Co.		155.160/155.160	KRZ980
Franklin/Gerald Area Amb. Dist.		Franklin Co.		155.160/155.160	KRZ980

Franklin/St. Clair Ambulance District		Franklin Co.		155.160/155.160	KRZ980
Madison Co.	4Axx	Downstate IL	F1	155.340/155.340	KQ5876
St. Clair Co.	4Cxx	M.E.R.C.I.	F2	155.340/155.460	KA5825
Clinton Co.	4Dxx	System	F3	155.160/155.160	KQ5876
			F4	155.220/155.220	

XV ST. LOUIS AMBULANCE SERVICE
Jay Fitch, Director
1405 Carroll
St. Louis, MO 63104
(314) 231-9095

F1 155.955 MHz WXR301
F2 155.220 MHz KSM949
F3 155.340 MHz KSN225
Tone Squelch 120.0 Hz

Priority Codes: (1st digit)
1 Not urgent
2 Unused
3 Urgent
4 Additional unit (urgent)
5 Additional unit (not urgent)
6 Supervisor (urgent)

Medical codes (2nd & 3rd digit)

00 Cardiac/Respiratory Arrest
01 Chest Pain
02 Choking
03 Short of Breath
04 Asthma
05 Smoke Inhalation
06 Non-traumatic Coma
07 Unconscious Before, Awake Now
08 Stroke
09 Seizure, Active
10 Post-seizure
11 Abdominal Pain
12 GI Bleeding
13 OD Drugs
14 Oral Poinsoning
15 Alcohol Intoxication
16 Diabetes
17 Vomiting
18 Infectious Disease
19 Other Medical Problem
21 OB Possible Labor
22 OB Delivery Imminent
23 OB Post Delivery
24 Pregnant, Vaginal Bleeding
25 Vaginal Bleeding
26 Sexual Assault
30 Shock from Trauma
31 Coma from Trauma
32 Head Injury
33 Face Injury
34 Eye Injury
35 Neck/Back Injury
36 Shoulder/Arm Injury
37 Chest Injury
38 Abdominal Injury
39 Hip Injury
40 Leg Injury
41 Genital Injury
42 Lacerations of Head/Face
43 Laceration of Extremity
44 Multiple Abrasions/Contusians
45 Gunshot Wound
46 Stab Wound
47 Major Open Wound
48 Minor/Moderate Burns
49 Major Burns, 40% or greater
50 Trauma Checkup
51 Auto Accident, Injuries Unknown
52 Auto Accident, Person Trapped
53 Person Struck
60 Psychiatric Problem, Calm
61 Psychiatric Problem
62 Suicide Attempt
63 Insect/Snake Bite
64 Animal Bite
65 Frostbite
66 Electric Shock
68 Possible DOA
69 Drowning
70 Fire
71 Special Assignment
72 Mass Casualty

E.G.: 138 = "Urgent run, abdominal injury."

NON MEDICAL EMS CODES

10-1	Crew under duress	10-19	Service refused	10-38	Victim gone on arrival
10-2	Loud and clear	10-20	Your location		
10-3	Busy, stand by	10-22	Unfounded	10-39	Clear
10-4	OK, will comply	10-23	Cancel assignment	10-40	Report
10-6	Call by phone	10-27	Needs fuel	10-42	Arrived
10-7	Out of service	10-28	Duty station	10-49	Case for Medical Examin.
10-8	In service	10-31	Mechanical trouble		
10-14	Request meals	10-32	Other transport	10-76	Enroute

EQUIPMENT: 6 Advanced Life Support Vehicles
4 Basic Life Support Vehicles
5 Clinic Vans

Public Safety

This column is for reporting Public Safety and Special Emergency frequency information, radio system details, radio codes, dispatch areas, unit numbering systems, etc. for police, sheriff, fire, forestry (except USFS), fish and game, highway patrol, state police, prisons, prisoner work camps, local government, highway and street maintenance, port authority/ bridge maintenance, animal control, ambulances, paramedics, hospitals, life guards, ski patrol, search & rescue, flood control, civil defense and disaster organizations. Input and questions for this column must be sent to the proper regional editors of Public Safety, who are listed below.

PUBLIC SAFETY - EAST

Send Public Safety and Special Emergency frequencies, radio system details, and questions for Connecticut, Delaware, District of Columbia, Florida, Georgia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Vermont, Virginia, and West Virginia to : Richard Barnett, P.O. Box 428. Newton Highlands, MA 02161.

Hello once again! First off, I would like to apologize for the mix-up in last months article. You saw an excellent example of a local newsletter from Pittsburgh, but I did plan to also have a similar example from a friend in Connecticut, Keith Victor. As far as I know, the Connecticut newsletter was not reprinted because of a problem with the width of the type. I'll try to work something out for a future issue. This month, however, as promised we'll have an excellent report from Joe M. Lewis of Maryland who has just been terrific with his Maryland updates. Also, we'll have information from Georgia where we have many fine, conscientious contributors. We'll have more from Louis A. Smith Who sent in that tremendous report on the Pennsylvania State Police for the February 1981 newsletter. And, finally, I'll try to get in a map or two from my upcoming Radio Frequency Guide to Massachusetts. More on that in the next newsletter.

MARYLAND:

From Joe (MD-015)

General Maryland Updates:

Montgomery County Transit Buses: 452.775 Base (Not 453.95 as reported May 1980)
Motgomery County Roads: 453.400 / Prince Georges County Animal Control 155.940
Prince Georges County-County Water Service: 48.380 / County Parks 159.390
Prince Georges County-Licenses & Permits: 45.520 / Shared L.G. channel for Cnty. 154.085

Washington D.C. Department of Environment, Trash Pick-up: 37.10 / Sewer Constr. 37.940
Washington D.C. Water Revenue 153.455 KVY297 / D.C. Public Schools 153.815 KVJ512
D.C. Water Repairs 158.130 / D.C. Dept. of Recreation 453.225 / Motor Pool 453.875
D.C. Highway Department 453.450, 453.750

Official Baltimore City Police Department Code Signals:

KGA Replaces Headquarters or Radio
10-1 Transmission Check
10-2 Signals Good
10-3 Signals Poor
10-4 Acknowledgement
10-5 Failed to Acknowledge
10-6 Stand-by. Busy, unless urgent
10-7 Out of Service -- Give 10-20
10-8 In Service
10-9 Repeat
10-11 Meet____at____
10-12 Not Available
SIGNAL 10-13 ASSIST AN OFFICER
-preceeded by an alert tone-
10-29 Check Records for Wanted
10-30 Person or Vehicle is Wanted - Caution
10-31 Crime in Progress
10-32 Sufficient Units on Scene
10-33 EMERGENCY
10-34 Major Civil Disturbance in progress
10-35 Major Crime Alert
10-36 Standby to Copy Discription
10-37 Requesting a Tow Truck
10-38 Requesting an Ambulance
10-39 Disabled Departmental Vehicle, give 10-20 and Vehicle Number
10-40 Request Crime Laboratory
10-41 Request Impound Truck

10-14 Wagon Run
10-15 Urgent Wagon Run
10-16 Back up Unit_____
10-17 Call Whatever You are Assigned to
10-18 Go into Whatever You are Assigned to
10-19 Return to_____
10-20 Location
10-21 Call_____(Somewhere other than 10-17)
10-22 Disregard
10-23 Arrived at Scene
10-25 Stopping Suspicious Vehicle, give 10-20, License Number,etc.
10-26 Request to change to City Wide Freq.
10-27 Driver's License Information
10-28 Vehicle Registration Information

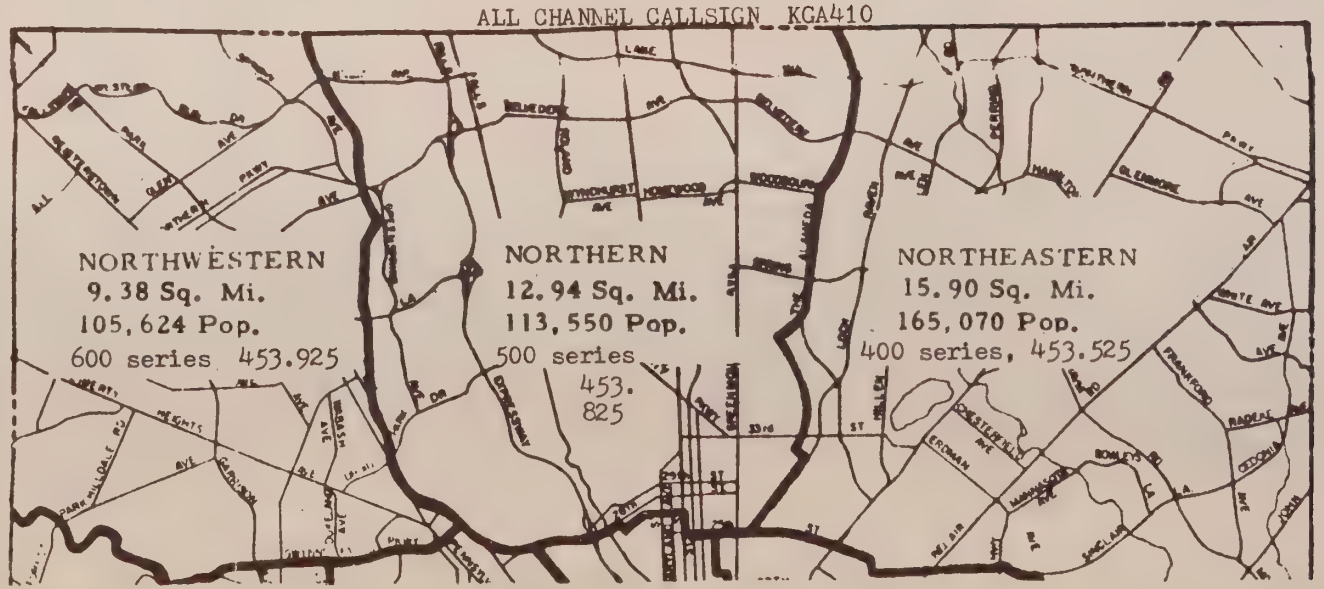
10-42 Request Animal Shelter
10-43 Malfunctioning Traffic Signal

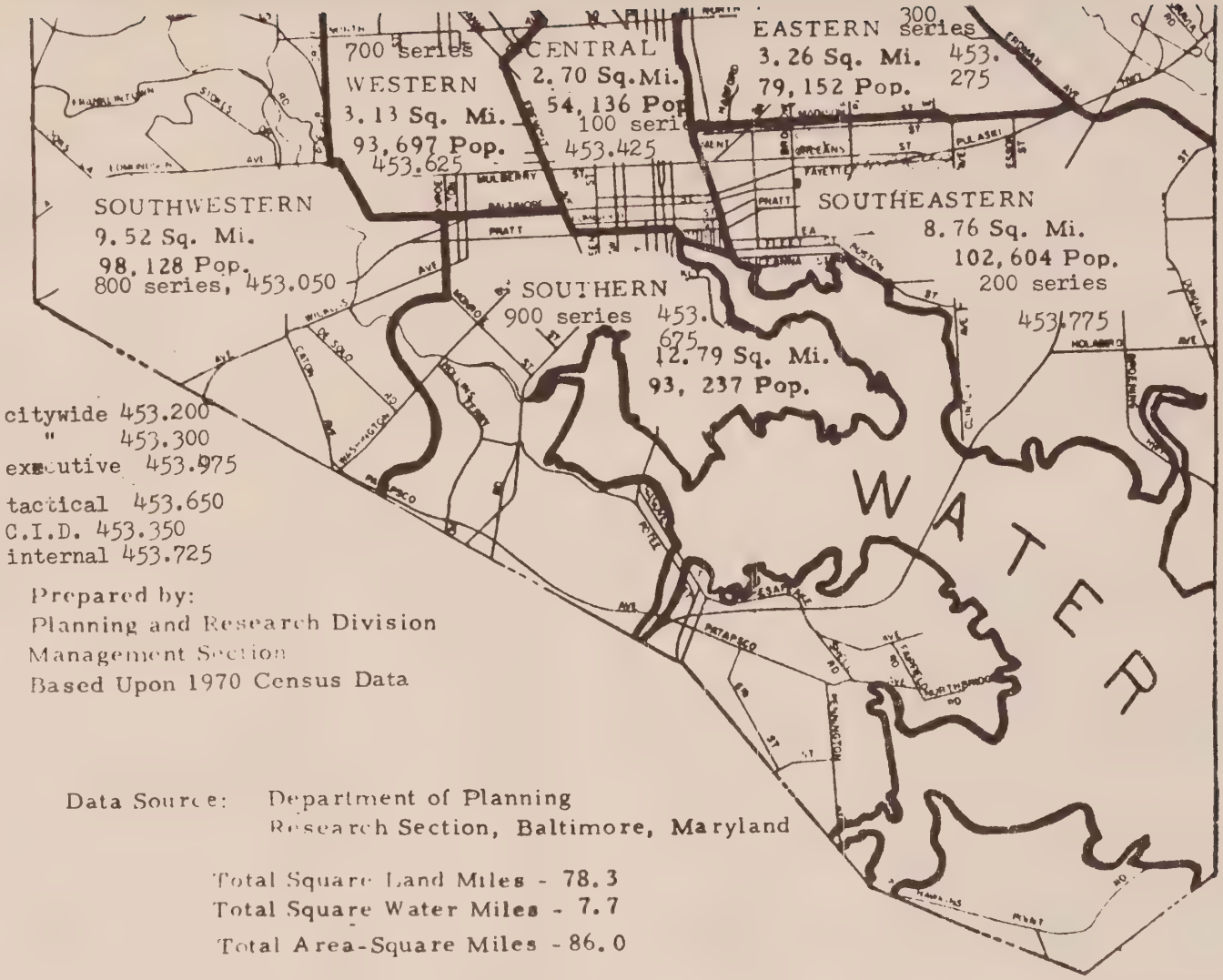
A - Signal Completely out
B - Red Signal out
C - Signal Sticking
D - Stop Sign or Yield Sign down or missing

10-44 Request Permission to patrol on Foot
10-45 Permission Denied
10-46 Permission Granted
10-47 Negative
10-48 Positive
10-49 Hourly Call -- give 10-20

Police Department

Baltimore, Maryland
ALL CHANNEL CALLSIGN KGA410





citywide 453.200
" 453.300
executive 453.975
tactical 453.650
C.I.D. 453.350
internal 453.725

Prepared by:
Planning and Research Division
Management Section
Based Upon 1970 Census Data

Data Source: Department of Planning
Research Section, Baltimore, Maryland

Total Square Land Miles - 78.3
Total Square Water Miles - 7.7
Total Area-Square Miles - 86.0

GEORGIA:

From Andy (GA-015)

Atlanta Police Districts (Metro Area)

Name	Assignment	Call Sign	X-mitter City	Frequency	Transmission Type
Atlanta	N.W. Zone 1	KRV-401	Atlanta	460.300	1 Repeater or Duplex
Atlanta	N.E. Zone 2	KRV-401	Buckhead	460.025	2 Repeaters or Duplex
Atlanta	S.E. Zone 3	KRV-401	Atlanta	460.075	1 Repeater or Duplex
Atlanta	S.W. Zone 4	KRV-401	Atlanta	460.350	2 Repeaters or Duplex
Atlanta	Central Z.5	KRV-401	Atlanta	460.150	1 Repeater or Duplex
Atlanta	Citywide	KRV-401	Atlanta	460.200	3 Repeaters /Simplex
Atlanta	Administra.	KRV-401	Atlanta	460.425	1 Repeater
Atlanta	Tactical	KRV-401	Atlanta	460.475	1 Repeater /Simplex
Atlanta	Detective	KIA-532	Atlanta	155.700	4 Repeaters
Atlanta	Airport	KIA-532	East Point	155.625	1 Repeater /Simplex
Cobb	F-1	KVF-579	Marietta	460.325	1 Repeater /Simplex
Cobb	F-3	KVF-579	Marietta	460.375	2 Repeaters /Simplex
Cobb	"C.I.C."	KVF-579	Marietta	460.500	2 Repeaters /Simplex
DeKalb	North F-1	KLE-867	Stone Mntn.	460.450	3 Repeaters /Simplex
DeKalb	Center F-3	KLE-867	Decatur	460.400	3 Repeaters /Simplex
DeKalb	South F-5	KLE-867	Decatur	460.100	3 Repeaters /Simplex
DeKalb	C.I.D. F-7	KLE-867	Stone Mntn.	460.125	1 Repeater - D.V.P.
DeKalb	"Ch. 9"	KLE-867	Decatur	460.225	3 Repeaters
Gwinnette	Dispatch	KSV-864	Lawrenville	460.275	2 Repeaters /Simplex
Gwinnette	"91"	KSV-864	Lawrenville	460.175	3 Bases /Simplex
Clayton	Ch. 1	KIH-556	Jonesboro	158.730	1 Repeater
Fulton	UninCorp.	KFV-817	East Point	158.775	1 Repeater /Simplex

Atlanta Sheriff's Districts

County	Spec. Inves.	Call Sign	X-mitter City	Frequency	Transmission Type
Clayton	NO	KZO-495	Jonesboro	158.895	2 Repeaters
Cobb	NO	KOM-899	Marietta	155.040	1 Repeater
DeKalb	YES	KVR-925	Decatur	154.845	4 Repeaters /Simplex
Fulton	YES	WSB-83	East Point	155.415	3 Repeaters /Simplex

Atlanta Suburbs

City	County	InterCounty	Call Sign	Frequency	Transmission Type
Alpharetta	Fulton	154.935	KIC-477	154.650	Simplex
Roswell	Fulton	155.370	KOM-652	453.825	1 Repeater - Scramblers
College Prk	Fulton	155.370	KIB-202	460.250	1 Repeater
Hapeville	Fulton	155.370	KIA-704	158.850	1 Repeater
East Point	Fulton	155.370	KIC-376	159.210	1 Repeater /Simplex
Chamblee	DeKalb	460.225	KTI-636	460.050	1 Repeater /Simplex
Doraville	DeKalb	460.225	WAC-44	460.050	1 Repeater /Simplex
Decatur	DeKalb	154.935	KGK-547	155.955	1 Repeater

Stone Mntn.	DeKalb	---	KXO-936	39.980	Simplex
Marietta	Cobb	155.790	KIC-334	159.090	2 Repeaters
Smyrna	Cobb	155.790	KII-551	156.150	2 Repeaters
Lilburn	Gwinnette	154.935	KXQ-815	453.450	1 Repeater
Norcross	Gwinnette	154.935	KOB-677	155.070	Simplex
Forest Park	Clayton	155.370	KIJ-718	155.670	Simplex
Lake City	Clayton	155.370	KZQ-570	155.085	Simplex
Morrow	Clayton	155.370	KSL-930	155.775	Simplex
Riverdale	Clayton	155.370	KFV-886	154.995	Simplex

Emergency Medical Services

County	Service To-	Agency	Frequency	Call Sign	No. of Units
Fulton	Atlanta, College Park	Grady Hospital	462.975	WRA-473	10
	South Fulton, East Point	Southern Amb.	155.340	KQF-624	4
	South Fulton, South Atlanta	Southeastern	155.340	KIL-449	3
	North Fulton, North Atlanta	Metro Inc.	462.950	WBS-258	6
DeKalb	All DeKalb, East Atlanta	DeKalb E.M.S.	460.525	KSQ-477	10
Cobb	North & West Cobb County	National Amb.	155.340	KGK-346	3
	South Cobb County, Marietta	Metro Inc.	462.950	WBS-258	5
Gwinnette	Entire County	Metro Inc.	155.295	KAA-683	6
Clayton	All County	Clayton Rescue	453.400	KJP-274	5
	North Clayton	Advance Rescue	155.340	KQF-624	2
Rockdale	All Rockdale	Rockdale E.M.S.	155.265	KCP-607	4

Note: Mobile I.C.U. care, Helicopter Ambulance and Jet Ambulance Service are provided by Metro Ambulance Inc. Metro is the largest E.M.S. agency in the state.

Atlanta Fire Departments

Atlanta
Tac 1 Dispatch 154.190 -Repeater KIK258
Tac 2 Base 154.445 mobiles 153.950; 33 Stations, 3 Airport Companies

DeKalb
Ch. 1 Paramedic 460.575 -Repeater KVJ775
Ch. 3 Dispatch 460.525 -Repeater KSQ477
) 20 Stations, 1 Airport Unit

Cobb
"Dispatch" 46.420 Simplex KFI651
"Auxiliary" 46.260 Simplex
) 20 Station, Dispatch via Plectron

Fulton
"Dispatch" 154.325 -Repeater KMJ811
8 Stations, 7 Volunteer Stations, 1 Airport Unit
Dispatch for: Union City, Fairburn, Alpharetta
Dispatch via: Alert Tones & Plectron

Gwinnette
Ch. 1 "Dispatch" 154.145 -Simplex WYV342
Ch. 2 "On Scene" 154.310 -Simplex & Mobile Repeater
14 Stations, Dispatch via Alert Tone

Clayton
Ch. 1 "Dispatch" 453.400 -Repeater KJP274
Ch. 2 "Rescue" 453.300 -Repeater
) 9 Stations, Dispatch via Plectr.

Suburban Fire Departments 154.280 INTERSYSTEM

Community	Frequency	Transmission Type	Call Sign	Number of Companies
Marietta	154.430	Repeater	KIJ-373	4
East Point	154.130	Simplex	KIS-436	4
College Park	154.265	Simplex	WYC-518	2
Smyrna	154.160	Simplex	KVZ-629	2
Roswell	460.600	Repeater	KZB-385	2
Decatur	154.250	Simplex	KDT-261	2
Forest Park	154.400	Simplex	KDT-298	2
Rockdale	453.975	Repeater	KKG-680	5

From C. Scott (GA-005) (letters from November & December)

In the October newsletter Ancy (GA-015) said that 155.370 is called "M.R.D. Band." In years of continuous monitoring of G.S.P. and Cobb police agencies, I have never heard 155.370 called this. 155.370 is called "Intercity" and is statewide. M.R.D. is 155.790 and is used by all ten municipalities in Cobb County plus Cobb S.O. and Cobb Police. All the municipalities and Cobb S.O. have it in their cars as well as at their bases because they are all (Victor) VHF high. Cobb Police is on UHF (uncle) so the base is the only C.C.P.D. that has M.R.D. (For some strange reason all Radio Shack crystals seem to be silver in color except M.R.D. which are gold colored.)

I just found the notes I took this summer at the Georgia State Patrol Post #9 here in Marietta. I went there to get an interview after out Chattahoogie raft race. Lt. McDermid is #039 and is the assistant Troop "C" Commander. Post #9 must be in Troop "C" or be the entire Troop "C". I assume "A" Troop is composed of several posts. The GSP commander holds the rank of Colonel and is #01. Post commanders are captains. The Captain in Marietta is #013. There are only two majors in the state.

During the raft race I heard Cobb County and the GSP talking "MC 100" on their respective frequencies. , I asked about this at Post #9. "MC 100" is a temporary command post which was used when the Southern Airlines plane crashed near the Cobb County and Paulding County line and will be used again for special purposes.

Today I saw two large men in uniform with pistols. They had a state car which told me that they were Georgia Market Police. The car they had had no radio, even though it was a marked state car. Both men did have hand-helds. The uniforms and car did say "Police" etc., and the car did have a blue tear drop light on the dash. Do you or other fellow members have the frequencies, radio numbers etc. on the Georgia State Market Police?

Today I called the state government information number to find out about the State Market Police. I found out that the officers of the Market Police go to a law enforcement acadamy for 6 weeks. They have limited police powers, and only in state farmer's markets. We have one huge farmer's market near the Atlanta Airport. There are various small farmer's markets in the state. I still would like these frequencies if possible.

At Post #9, GSP I copied 155.190 and 155.910 off the license. The license also said that 155.910 is for "repeater talk-around." Also the station or license persuant to Section 90. 249.

I am a night student at Marietta-Cobb Area Vocational Technical School. An E.M.T. class had their last night of school on 06-02-80. On that night I found two state E.M.T. training vehicles parked at the school. They each had three antennas. They all appeared to be VHF. I assume one to be 155.340, but I'm curious about the other two radios in each vehicle. (Maybe Andy's article will clear that up for you -ed.)

Occasionally I have seen a blue chevrolet, not of a recent year, with a blue teardrop light on the dash and marked "Cobb County Traffic Enforcement." Cobb P.D. generally stops speeders and writes tickets and to my knowledge I have not heard any radio car designator numbers that would apply to these traffic enforcement cars. Do you or any of the members have any ideas?

(from January '81)

This morning I started receiving our new "Bear in the air." Today was the first day of a new federally funded program to have the Georgia State Patrol catch more truckers. A lot of car drivers had complained that trucks high-balled through Georgia and the police were looking the other way. The chopper is #665 Atlanta. So far I have received it only "car to car" on 154.680.

Yesterday I received "State C.D." -KBE608 on one of our state sheriff's net of 154.905 and 154.935. I do not know whom he was talking to. He was looking for a radio check. State C.D. said he would go to State Fish & Game for a radio check too. Mike (GA-012) said in the August column that, "also some Fish & Game mobiles have their local Civil Defense or search-rescue frequency." Every local C.D. has their own frequency with the statewide network on 45.560. State C.D. gives regularly scheduled weather broadcasts at 0400, 0800, 1200, 1600 and 2400 hours plus special broadcasts as needed. These are not the NOAA forcasts. These broadcasts originate from Stone Mountain near Atlanta with call sign KUX283. Both KBE608 in Atlanta and KUX283 call themselves State C.D. G.S.P. in Atlanta is on 45.56 with call sign KIB601.

From Lewis (GA-008)

Savannah Police

Channel #1	460.025	Main Dispatch
Channel #2	460.200	Detectives and Traffic (daytime only)
Channel #3	460.325	Car to Car
Channel #4	460.400	Records and Information
Channel #5	460.475	Crime Prevention Units (mostly scrambled traffic)

Chatam County Police

Main Dispatch	155.130	Repeater	
Car to Car	154.740	Base/mobile	-This channel is also used for records and info, as is used by the various courts and deputies. It is also a dispatch channel for some of the incorporated areas in the county that do not have their own local frequencies.
Detectives	156.030	Repeater	
Drug & Animal Control	156.030	also	

154.085	Garden City area Police-Fire-EMS	155.055	Port Wentworth Area Police & L.G
154.310	Savannah City Fire	154.190	Savannah Fire -Southside District
154.340	Savannah Fire -Seventh District	154.445	Typee Island
154.515	Hardeeville S.C. Fire	154.145	Hilton Head S.C.
155.160	Chatam County EMS	155.220	Field's Ambulance
155.175	Westside Clinic	154.145	Hilton Head S.C. EMS
155.340 & 463.000	All Area Hospitals		
45.080	Savannah Municipal Services	45.240	Savannah Municipal Services
45.280	Savannah Civil Defense	453.925	Savannah Housing Authority
453.200	Savannah Transit Authority		
45.120	Chatam County Road Maintenance	45.320	Chatam County Mosquito Control
155.940	Chatam County School Security		

Editor's Note: Lewis sent this data in a while back and this is the first chance I've had to get it printed. If any frequency is outdated, that is the reason.

From Louis A. Smith II, PA-026...

PENNSYLVANIA TURNPIKE RADIO SYSTEM

The Pennsylvania Turnpike Commission operates a radio system on two VHF repeater channels which cover the entire length of the toll road. This system was adopted during the mid-1960's, and includes all ambulances, tow trucks, highway maintenance, and state police units which are assigned to patrol the pike.

The turnpike's communications center is located in Harrisburg, and signals from this main station are fed into the various repeater sites via a microwave link. Likewise, signals from all interchanges, barracks', and maintenance garages are input to the system with microwave links.

Ambulances, tow trucks, and highway maintenance vehicles are equipped to operate only on the two repeater channels, but state police turnpike patrols can communicate on the A, B, C, and M & M frequencies outlined in my previous article on the PSP. Turnpike state police operate primarily on the repeater channels, and refer to the regular PSP radio in the vehicles as the "county radio", as it is only used to communicate with PSP mobiles from barracks in surrounding counties. The M & M Channel (154.755 MHz) is used often for coordination between cars and helicopters for speed check and law enforcement purposes, as the copters are unable to work the turnpike repeater frequencies.

The 470 miles of toll road across the Commonwealth are divided up into five radio districts. The boundaries of these districts are listed below:

District	Mile post
T1	0-100
T2	100-199
T3	199-301
T4	301-360
T5	A0-A110

Districts T1 through T4 cover the east-west corridor of the pike. At about mile 333, a north-south extension was added some years ago. This portion of the turnpike, known as the Northeastern Extension, has been designated District T5, and mile post markers along this segment are numbered A0 through A110, going north.

Since most people who travel the PA Turnpike do so for a relatively short distance (less than 100 miles), the chart reproduced elsewhere showing interchanges, mile posts, and district repeater frequencies will be helpful for quickly locating the active frequency for the section of the highway you are traveling.

It should be noted that adjacent districts do not operate on the same frequency pair. Rather, the channels alternate about every 100 miles. This is done to eliminate the co-channel interference which could result if too many stations were transmitting on the same frequency pair.

Also, note that in order to keep abreast of all turnpike police communications it is necessary to monitor the statewide M & M Channel, as this is sporadically used for short distance direct communication between mobiles.

On the PA Turnpike, 150-series units are ambulances. 200-series units are tow trucks, 300-series are state police, and 2000-series are highway maintenance vehicles. PSP helicopters working in conjunction with turnpike authorities are numbered H1 through H8, and operate on regular PSP channels. PSP Channel M-M (154.755) is used for simplex communications between helicopters and Turnpike Troop T patrols.

The main communications center in Harrisburg, which controls all functions of the system, operates on both repeater channels in their respective districts under the call sign KGI78. This call is transmitted regularly on the hour and half-hour, but at all other times the station identifies simply as "Harrisburg."

Marked state police vehicles on the turnpike can be identified by the Troop District identifier painted on the roof ("T1" through "T5"), and the individual unit number (308, 327, 349, etc.) on the trunk.

Often, a station assigned to one district will want to communicate with another station located in another district. An example of this

would be when an interchange in District T1 wanted to contact another interchange in District T2. Since stations and interchanges cannot intercommunicate with other districts directly, the calling station operator at the main communications center connects the two districts with a radio patch by using special controls, allowing the units of the two districts to freely communicate with one-another. When the desired intercommunication is completed, the initial station requests that Harrisburg "break the patch", thus restoring the various segments of the repeater system to normal usage. When two districts are patched together, both sides of the conversation are repeated by the transmitters in both districts, allowing you to hear both the station in your district as well as the station(s) in a different district.

Radio patches are also used during inter-district car chases and similiar operations, or for messages between interchanges concerning large trucks and wide loads. All mobile units are capable of switching their radios from one frequency to the other when they actually travel from one district into another. However, for inter-district transmissions, they too must ask the Harrisburg center for a radio patch.

Turnpike Troop T of the PSP, as well as all other base and mobile stations, uses the same coding system as was outlined in my previous article on regular PSP communications. In addition, turnpike units utilize the following signals not assigned for use by non-turnpike stations:

10-71 IBM service requested
10-72 Electrical service requested
10-73 Plumbing service requested
10-74 Reservations requested for...

Also, other codes are used by interchanges for administrative purposes, and designate various types of trucks or cargoes which traverse the pike. Transmissions such as "Donegal Interchange to Harrisburg, 18-21-56-34" are examples of such administrative codes. I have been unable to obtain a copy of these codes & signals. Can any member be of assistance?

One piece of jargon to note is that a person travelling the pike is called a "patron." This reference will be heard time and time again on the air.

Monitoring the activities of the turnpike radio system can be especially informative to the traveller, as locations or accidents, roadway construction, and other dangerous conditions can be received miles before they are encountered, leaving ample time to find an alternate route. Thanks to the repeater system, all base and mobile transmissions along the entire 100-mile length of a district can be received consistently from any point within a district. This is because the system utilizes a sophisticated network of voting receivers and several transmitters throughout each district.

In order to increase the system's efficiency, bi-directional antennas are used, confining the transmitted signal to the east-west or north-south corridor of the turnpike.

Hourly road and weather summaries (10-43's) are broadcast, providing important information to the scanner-equipped traveller. In addition, help can be summoned immediately from PSP base and mobile stations, as the turnpike commission has outfitted these units with CB radios for communicating on Channel 9. The statewide CB call sign is KSH9646.

Currently all mobiles are equipped with General Electric MASTR II FM transceivers.

As the turnpike's radio network has been working efficiently for a number of years, with very few problems being encountered, it

is improbable that any major equipment changes will be made in the near future. The only change which could be expected would be the addition of the NLEEC frequency for statewide state/local law enforcement intersystem communications. This will only occur should the PSP adopt this channel. Scrambling and other specialized techniques are not being planned at this time.

This article is the second in a series on Pennsylvania statewide communications systems. As wilt all the information contained in these articles, errors and omissions are apt to occur, due to the difficulty which is encountered obtaining info of this type. Any additions, corrections, or updates are encouraged and requested.

My next installment will cover the Pennsylvania Dept. of Transportation (PennDOT) communications network.

*****Corrections to PSP Frequency Allocation Plan****

As printed in the February, 1981, edition of the Newsletter, the following errors appeared in the PSP frequency allocation plan on pages 41-42: listings for "Troop F" were incorrectly labeled "Troop E"; the correct Troop F listings were not published; listings for Troop M were fractured in a confusing manner when continued from page 41 to page 42.

The correct information should read as follows:

Pennsylvania State Police Frequency Allocation Plan

Troop E (Channel A)	
Erie (Erie)	KDN501
Corry (Erie)	KXH387
Franklin (Venango)	KXH388
Girard (Erie)	KXH389
Meadville (Crawford)	KXH903/KXO904
Warren (Warren)	KXO932

Troop F (Channel A)	
Selinsgrove (Snyder)	KDN495
Coudersport (Potter)	KXH368
Emporium (Cameron)	KXH370
Lock Haven (Clinton)	KXH371
Mansfield (Tioga)	KXH372
Shamokin (Northumberland)	KXH374
Montoursville (Lycoming)	KXH915
Milton (Union)	KXO920

Troop M (Channel A)	
Bethlehem (Northampton)	KXH326
Fogelsville (Lehigh)	KXH329
Trevose (Bucks)	KXH330
Dublin (Bucks)	unknown

Troop N (Channel B)
Station at Fernridge should read Monroe, not Columbia County.

NOTE: To those members who sent me SASE's at R.D.#6 Box 479, Latrobe, PA 15650, concerning my book, The Complete Action Guide to Scanners & Monitors, your response is appreciated and as soon as I obtain more information from the publisher I will be getting back to you.

My next article will provide details on the Pennsylvania Department of Transportation (PennDOT) Radio System!

PENNSYLVANIA TURNPIKE RADIO SYSTEM

Exit #	Location	Mile Post	District & Channel to monitor
1	Gateway (Ohio line)	1.3	
2	Beaver Valley	12.8	
3	Perry Highway	28.4	
4	Butler Valley	39.1	
5	Allegheny Valley	47.5	District T1/159.045 MHz Channel 1
6	Pittsburgh	56.5	
7	Irwin	67.4	
8	New Stanton	75.5	
9	Donegal	90.7	

PUBLIC SAFETY - EAST CONTINUED

10	Somerset	109.9	
11	Bedford	145.5	
12	Breezewood	162.9	District T2/159.075 MHz
13	Fort Littleton	179.5	Channel 2
14	Willow Hill	188.6	
15	Blue Mountain	201.3	
16	Carlisle	226.3	
17	Gettysburg Pike	236.1	
18	Harrisburg West Shore	242.0	
19	Harrisburg East	247.4	District T3/159.045 MHz
20	Lebanon-Lancaster	266.4	Channel 1
21	Reading-Lancaster	285.5	
22	Morgantown	298.0	
23	Downington	312.0	
24	Valley Forge	326.3	
25	Norristown(NE Ext. Jct)	333.1	
26	Fort Washington	339.5	
27	Willow Grove	342.9	District T4/159.075 MHz
28	Philadelphia	351.3	Channel 2
29	Delaware Valley	357.7	
30	Bridge (New Jersey line)	359.0	
31	Lansdale	A10.3	
32	Quakertown	A23.9	
33	Lehigh Valley	A37.2	(NORTHEAST EXTENSION)
34	Mahoning Valley	A55.7	
35	Pocono	A74.7	District T5/159.045 MHz
36	Wilkes-Barre	A85.3	Channel 1
37	Wyoming Valley	A94.6	
38	Scranton (terminus)	A110.3	

Channel 1 repeater input= 156.195 MHz
Channel 2 repeater input= 156.225 MHz

UNIVERSITY OF MASSACHUSETTS AT AMHERST, WORCESTER & BOSTON
POLICE RADIO CODES

1. Guarded Transmission
2. Request Backup Units at...
3. Available Units Backup at...
300. OFFICER IN TROUBLE
4. Out of Car at...
5. Meet another Unit at...
6. Current Location of Unit
7. Motor Vehicle Accident
8. Motor Vehicle Stop
9. Registration Listing
10. Stolen Check (Plate or VIN)
11. License Check
12. Meals
13. Suspicious Vehicle
14. M&W Check
14A. Trespass Check
14B. Affiliation Check
15. Suspicious Person
16. Intoxicated Person
17. Unstable Person
18. Weapons Complaint
19. Sick or Injured Person
20. Missing Person
21. Person in Custody
22. Fight in Progress
28. Building/Area Check
28A. Building Secure
29. Vandalism
31. Larceny
32. Larceny by Check
33. Rape
34. Robbery
35. Assault & Battery
36. Breaking & Entering
37. Narcotics Offense
38. Fire Alarm
38A. Intrusion Alarm
38B. Bomb Call
39. Confiscation
40. Annoying Behavior
40A. Annoying TX
41. Burglary
42. Stolen Motor Vehicle
43. Beverage Complaint
44. Sudden Death
46. Vice Complaint
47. Assist Citizen
47A. Assist other Agency
48. Parking Complaint
49. Animal Complaint

23. Disturbance of the Peace
24. Domestic Complaint
24A. Family Disturbance
24B. Child Abuse
26. Transport
27. Open Door/Window
51. Maintainance
52. Lost or Found Property
53. Money Escort
54. Return to Headquarters
56. TX Headquarters
57. Investigation
58. Services

PRIORITY CODES = 1. In Progress / 2. Just Occurred / 3. Incident Report/ 4. At Your Conv.

SPRINGFIELD POLICE RADIO CODES:

1 Man Down
2 Dog Complaint
3 Traffic Violation
4 Auto Accident
5 Domestic Complaint
6 Gang Complaint
7 Assist Ambulance
8 Call Station
9 Drunk
10 Assist Officer
10E Assist Officer - Emergency
12 Transport
12E Emergency Transport
22 Return to Station
69 Armed Robbery

Partial list only.

SPRINGFIELD FIRE RADIO CODES:

Signal 1 Re-wind the Box
Signal 3 Chief Officer Respond to Location
Signal 4 Company in Service
Signal 4-4 All Companies Responding in Service
Signal 5 Emergency Call
Signal 6 Bomb Threat
Signal 7 Send Police to Scene
Signal 9 Send Fire Marshall to Scene
Signal 10 Send Ambulance to Scene
Signal 11 Fatality
Signal 12 Send Medical Examiner to Scene
"K" Acknowledgement

Ambulance to Hospital traffic on 154.400 and 161.430 utilizes different codes.

M A S S A C H U S E T T S

From Richard (MA-004)

AREA I

Area I Headquarters
Civil Defense Office
Building 5
Tewksbury State Hospital
Tewksbury, Massachusetts
Tel: 851-7251, 851-7252
944-1184 (Reading)

PUBLIC SAFETY - CENTRAL

Send Public Safety and Special Emergency frequencies, radio system details, and questions for Alabama, Arkansas, Iowa, Kansas, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Nebraska, North Dakota, Oklahoma, South Dakota, Tennessee, and Texas to: Mike Redman, P.O. Box 1177, St. Charles, MO 63301

Send material and questions for Illinois, Indiana, and Wisconsin to: John Arendt, 327 Boulder Hill Pass, Oswego, Il 60543.

Greetings and welcome to another PS-Central Column. This month, I am pleased to announce the addition of another co-editor, Ken Pehl, TX-003. Ken will be covering the Southern states of Texas, Oklahoma, Arkansas, Mississippi, and Louisiana. So, if you have material, questions, or comments for that region, send them to Ken at 108 East Centre Street, Fredericksburg, Texas, 78624. Let's give Ken a fine welcome as coeditor. I now have two of the finest writers in the RCMA writing for PS-Central: Ken Pehl and John Arendt. Later in this article will be an introduction by Ken. Now if you haven't sent for your packet of information on the Spring Festival, there is still time for you to get in on the fun. Write to me at the address above. As I get adjusted to my new position where I work (I'm not used to working days with evenings and weekends off) I'm also trying to adjust my RCMA workload as well. It may be taking a bit longer for me to respond to your cards and letters, but hang in there, for I'll get to all of you eventually. As postal rates rise it becomes imperative that more of you send a Self Addressed Stamped Envelope or Stamp for a reply. On to business at hand-lots of material to cover this month.

MISSOURI

Just a few words here about the blossoming St. Louis Chapter. We're meeting every fourth Sunday at members' homes in and around the St. Louis Area. If you're traveling through the area and you'll be in St. Louis on the fourth Sunday, give me a call or drop me a card. I'll be in touch with the meeting date, time, and location. For those of you in and around the St. Louis Metropolitan Area who haven't gotten involved in the St. Louis Chapter, what are you waiting for? Give me a call or drop me a note at the address above. Do it today!

MINNESOTA

CHUCK (MN-008) wants to start a MINNEAPOLIS-ST.PAUL AREA CHAPTER! If you're interested and live in that area, contact Chuck Steier, MN-008, 2910 E. Franklin Avenue, Minneapolis, Minnesota, 55406. OR you may call Chuck at 612-338-5863 days, or 612-887-9600 nights. Let's help Chuck get this chapter off and rolling! Keep me advised, Chuck, on your progress.

MISSISSIPPI

TOM (MS-010) has supplied this excellent information on the State of Mississippi Civil Defense and State Police Network. Tom has done an outstanding job of putting it all together, so here it is complete:

EXHIBIT 1 - MISSISSIPPI HIGHWAY PATROL DISTRICTS & SUB STATIONS

This map is rather self-explanatory. Each MHP sub-station uses two-frequency simplex operation for communication between mobile units and the sub-station. Mobile units communicate with each other on 42.02 MHz. This frequency is also used by MHP mobile units to communicate with sheriff department bases and sheriff units. These SO units and bases, in turn, talk cross-channel back to the MHP mobiles and bases on 45.22 MHz, which is the statewide sheriff frequency.

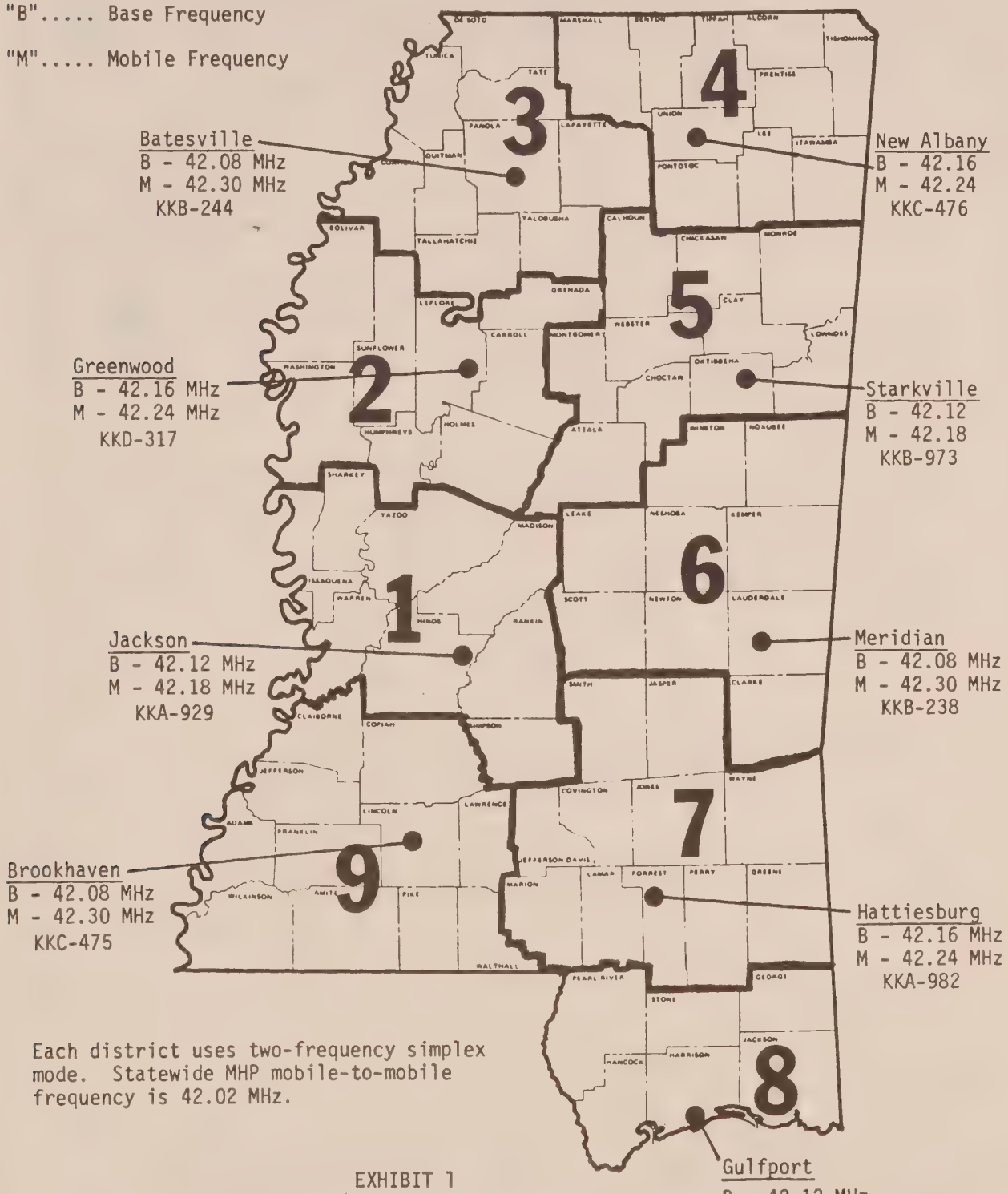
Not only is 45.22 used by all PD's and SO's, but all MHP sub-stations transmit and receive on this common frequency. Another inter-city frequency commonly used between departments is 155. 490 MHz. Mississippi Highway

Patrol uses 451.550 MHz and 456.550 MHz as repeater frequencies, but I don't know if they use any VHF-high at this time however. The call sign for MHP mobile units is KA 5810.

The Mississippi Highway Patrol has a large, specially outfitted van which serves as a mobile command post during emergency situations. This self-contained unit has an array of communications equipment which enables it to keep in touch with MHP units and sub-stations, sheriff personnel, Civil Defense, National Guard and a host of other agencies. This vehicle is known on the air as "735," short for its assigned call sign (?) of KKC-735.

"B"..... Base Frequency

"M"..... Mobile Frequency



Each district uses two-frequency simplex mode. Statewide MHP mobile-to-mobile frequency is 42.02 MHz.

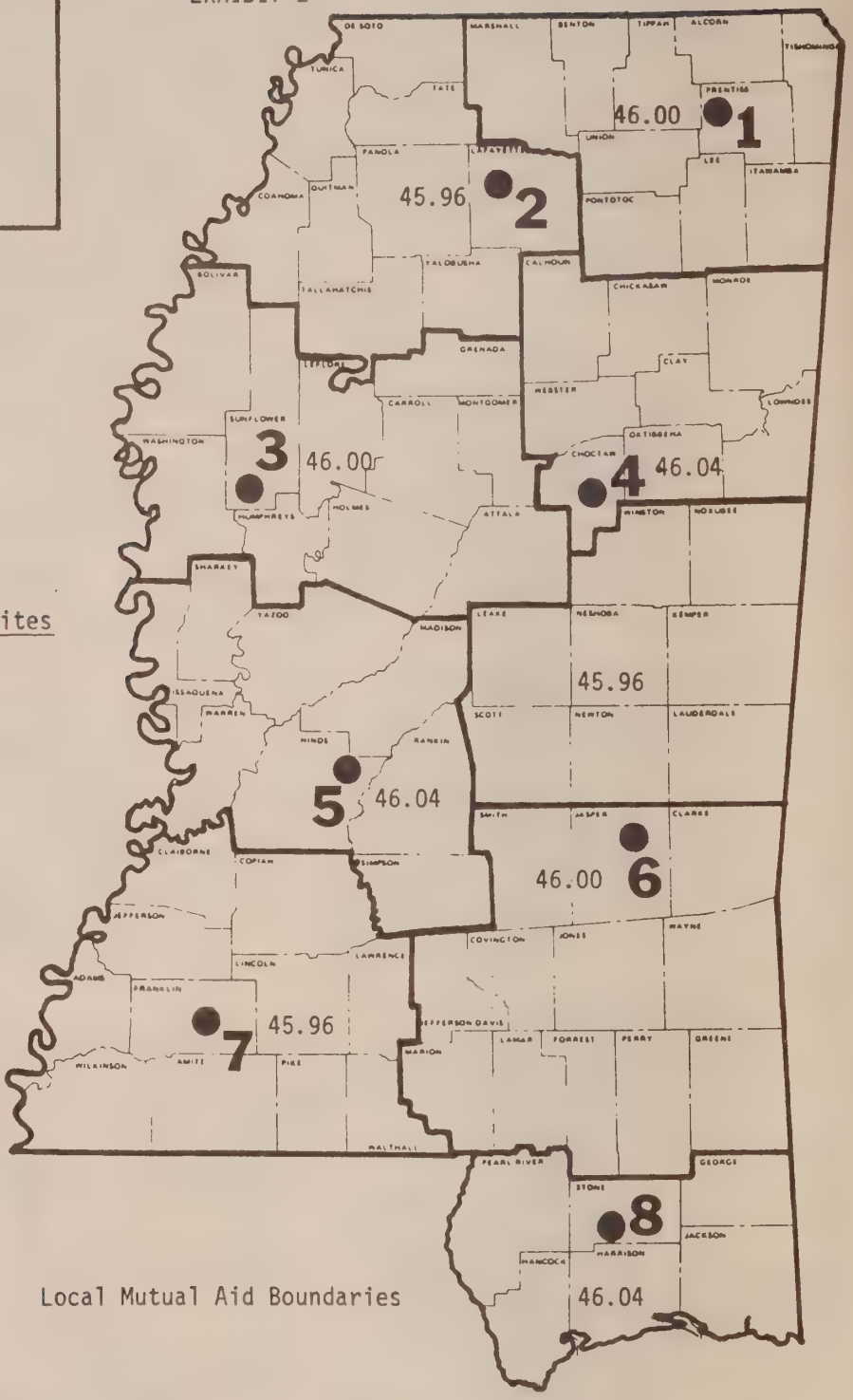
EXHIBIT 1

10/1/80

MISSISSIPPI HIGHWAY PATROL DISTRICTS AND SUB-STATIONS

MISSISSIPPI
CIVIL DEFENSE
COMMUNICATIONS
NETWORK

EXHIBIT 2



Remote Transmitter Sites

1 Booneville
2 Oxford
3 Inverness
4 Ackerman
5 Jackson
6 Rose Hill
7 Bude
8 McHenry

Statewide Frequency - 45.92 MHz

EXHIBIT 2 - MISSISSIPPI CIVIL DEFENSE COMMUNICATIONS NETWORK

As with the map in Exhibit 1, this one is rather self-explanatory. The CD and MHP districts are geographically similar, and each CD district has a particular low-VHF frequency assigned for district use

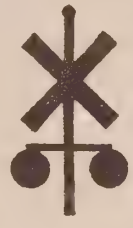
What is shown on the map as "remote transmitter sites" is actually the locations of Mississippi Educational Television Network (PBS) towers. Repeaters affixed to these 1,000-ft. towers repeat 45.92 MHz and certain

UHF frequencies (unknown at this writing), in order that mobile units and bases can communicate with each other from anywhere in the state.

Emergency Operating Centers (EOC's) are located throughout the state and prove to be interesting listening at times. The EOC for my home county (Pike) is located in the city of McComb. The Pike County EOC has multi-frequency contact with all safety agencies, as well as a NAWAS drop, weather teletype, etc. Most routine traffic from this facility occurs on 45.68 MHz (daily dispatching for county gov't), 45.92, and 45.96. Some EOC's use one or more frequencies for strictly local Civil Defense operations. These frequencies are usually VHF-high.

The statewide frequency of 45.92 MHz is used primarily for base to base communications. Many mobiles, however, are also licensed on this frequency in order to allow inter-district coordination and to give state headquarters in Jackson direction and control over these units.

Continued on next page ⟶



Railroads

Ken Fitzgerald, Editor

Send information about railroad frequencies and their uses, radio system details, tips for monitoring railroads, explanations of railroad jargon, and related information and questions to: Ken Fitzgerald, 121 East Hackberry, Enid, OK 73701.

My apologies to the membership for the lack of a proper "Railroads" column for the past several months. I also apologize to those members who have written in requesting information and have received no response from me as yet.

I started a new job one year ago, and my training in addition to covering an unusually large territory left me with little or no free time to devote to my R.C.M.A. duties. My employer has now doubled our staff in this area which will soon decrease my workload, but assisting in the training of these new people in addition to my regular duties made it impossible to write a proper column these past several months.

Starting next month there will be a regular railroad column once again. I want to thank those patient contributors such as Joe Lewis (MD-015)who have continued to send in information regardless of my lack of any proper response to their requests. I also want to appeal to all the rest of the membership that is interested in railroad monitoring to please send in anything they can about their local frequencies and how they are used. My files contain the necessary information to determine what frequencies are licensed for use just about anywhere, but my accurate information on how the frequencies are used--road channels, yard channels, police channels--beyond the states immediately surrounding me is limited to a few contacts in the railroad industry, and primarily to what <u>you</u> send in. I need more regular contributions in the near future to keep the level of interest in this column at a maximum where you and I both want it to be.

I realize I cannot ask you out there to put the effort into tracking down the data for your contributions unless I put in the proper effort to utilize them effectively. I am going to do my part from now on, but without the help of you new and old members out there, this column will not be nearly as interesting as it could be. That's all from my soapbox for now, so I'll see you all next month with a regular column once again. Send those contributions!

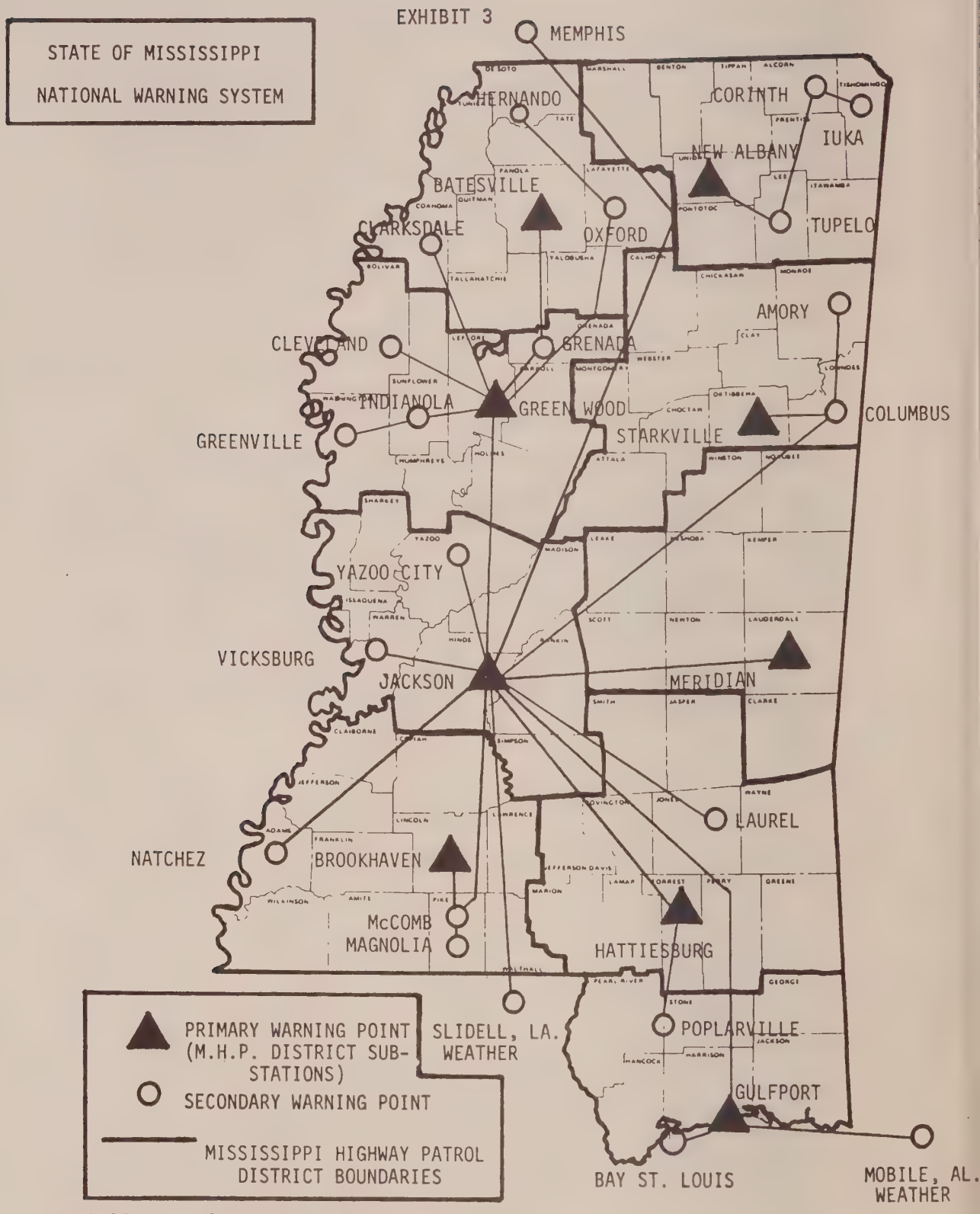


EXHIBIT 3 - NATIONAL WARNING SYSTEM

The state's Civil Defense warning system is based on the idea of primary and secondary warning points. The state of Mississippi is broken down into the nine Highway Patrol districts, with the sub-station in each district serving as the primary warning point for that section of the state. Secondary warning points are EOC's, sheriff offices, police stations, etc.

As each secondary point is warned, units from each installation (fire

trucks, police cars, CD units) "fan out" with mobile PA systems to warn the local populace. The system also depends on broadcast radio stations for alerting. I know this is a crude description of the actual system and there is undoubtedly much more involved than what I am aware of, but I hope this article will give the readers an idea of the basic concepts utilized. The National Warning System map was based on an illustration contained in "Mississippi Civil Defense Council - A Management Analysis Project," prepared by the Central Mississippi Planning & Development District.

TEXAS
Introducing... Ken Pehl!

Greetings to the readers of this column and to my fellow members of the RCMA. I have been most graciously asked to help out the Public Safety-Central editor by helping edit a sub-column for the states of Texas, Arkansas, Oklahoma, & Mississippi. Persons with material to contribute concerning these states are asked to send the material to the following address: Ken Pehl (TX-3), 108 E. Centre St., Fredericksburg, TX 78624. I am very new to the editing game and ask for your patience and understanding while I learn the trade. I do ask for your comments and constructive criticism to help shape this column into a format suitable to the majority of the readers of this portion of the column. I will be depending heavily upon reader's input to write this column, so please send your information, ideas, partial frequency lists, anything!

Over the past several months you have been seeing a serialized version of two articles I wrote concerning Texas state-wide radio systems. I hope this was of interest. For the benefit of those readers too new to have received past newsletters containing my articles, let me re-introduce myself as well as give a few more details about myself. I am Ken Pehl, TX-003. I am 26 years old. I have been an active monitor listener for almost seven years now, having started shortly after graduating from high school. I have cerebral palsy and am in a wheelchair. I presently have three scanners: an SBE Opti-scan, a Midland 13-925 8 ch. crystal controlled, and a Bearcat 210. At the beginning of my listening activities, I did not know much about the communications field in general or about the communications systems in my area. In fact I did not even understand 20% of what I heard. For example, I didn't know the difference between 10-7 and 10-8. Do you remember your naive beginnings? Over the years I have gathered an interesting collection of data, most all of which I have already shared with you through my previous articles. I am certain that there are many more details still missing and/or incorrect. I sincerely hope to someday be able to update even further the material already published. My main monitoring interests are of state agencies and mutual aid communications networks. I have an interest in electronics and I studied electronics in both resident school and with home study courses. I presently hold an FCC 2nd class commercial radiotelephone license. I work part-time repairing CB radios on a contract basis with a local electronics shop. It was my interest in electronics that lead me to my interest in monitoring in order to study communications systems. Eventually it lead to the rewarding hobby it is today. I am not an expert in electronics or in communications systems nor do I pretend to be, though I hope to someday understand commercial systems more thoroughly. Very recently I obtained an amateur license, though I have had an interest in ham radio for several years. I am presently a technician class licensee--my call is N5CND. I will admit to having let my amateur activities steer my finances away from my monitoring interests, at least for the time being.

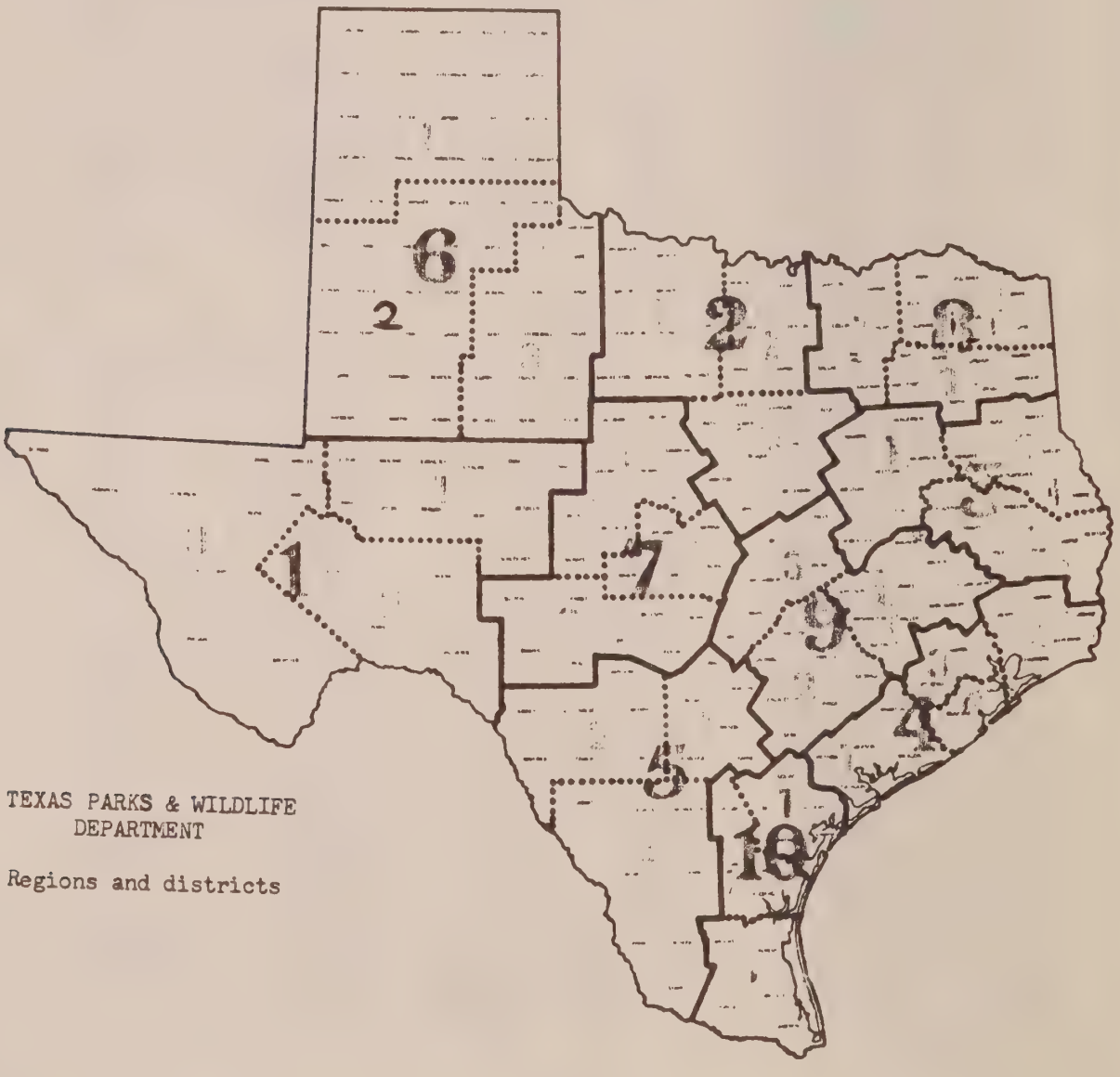
As column editor I sincerely hope that with the experience of corresponding with many fellow members I will be able to further enhance the material already published on the states over which I have been given responsibility. As editor I will always welcome additions, corrections and error detection to go along with the new material. In fact I am actively encouraging it. If you have some data which differs from something already published, send it in! That way others may see the two versions and perhaps the actual version can be discovered. DON'T feel shy about your differences in details! As I began this initial column I am already thinking ahead of what to do for subsequent columns. I would especially like to see a serious analysis of each major metropolitan areas systems in each state. The system details given for the city of Houston in the February is a good example. I am working on a source for further details for the city of Houston and if this works out, this may be the subject of my next column. So this is the time to get your pencil and paper out and write me about your area's system. Get those cards and letters flowing!

Roster of 155.370 Intercity state licensed transmitters
(w/ footnotes of agencies)

Agencies (when known)	Licensed location	Callsign
?	Abilene	WYV 274
Abilene DPS	Abilene	KKC 674
Texas Alcoholic Beverage Commission (TABC)	Abilene	WXF 717
Amarillo DPS	Amarillo	KKI 412
TABC	Amarillo	WXF 725
?Texas Dept of Corrections? (TDC)	Angleton	KKG 639
?Univ.of Texas/Arlington?	Arlington	KYV 205
Austin DPS (primary call)	Austin	KKD 303
(mobile command post statewide temporary bases)	Austin	KKM 304
Capital security base	Austin	KTN 450
Parks & Wildlife (P&W)	Austin	KXA 481
TABC	Austin	WXF 711
TABC	Austin	WXF 712
Austin DPS (auxiliary)	Austin	KKL 745
P&W	Baytown	KXA 480
Beaumont DPS	Beaumont	KKE 469
TABC	Beaumont	WXF 710
?TDC?	Bonney	KKG 637
?TDC?	Brazoria	KKG 636
?	Brownwood	KXO 795
Bryan DPS	Bryan	KKV 232
TABC	Bryan	WXF 713
???	Camp Swift	KDU 599
Del Rio DPS	Carta Valley	KDB 200
Childress DPS	Childress	KDG 262
?	Corpus Christi	KZR 521
TABC	Corpus Christi	WXF 705
?TDC?	Crockett	KZV 303
?	Crosbyton	WZC 509
?	Cusseta	KYL 816
?	Dallas	KYV 205
?UT/Dallas?	Dallas	KDU 570
TABC	Dallas	WXF 720
El Paso DPS	El Paso	missing from P.C. list
TABC	El Paso	WXF 722
UT/El Paso	El Paso	KRK 938
San Antonio DPS	Elmendorf	KKI 413
TABC	Ft Worth	WXF 719
?TDC?	Gainsville	KXO 796
Corpus Christi DPS	Gallatin (?)	KKC 784
?	Galveston	KDU 597
TABC	Galveston	WXF 707
Dallas DPS	Garland	KKA 603
?TDC?	Gatesville	KXO 797
?TDC?	Gatesville	KYD 936
?TYC?	Giddings	KXO 798
Harlingen DPS	Harlingen	KKA 592
Houston DPS	Houston	KKC 588
?UT/Houston?	Houston	KDU 626
TABC	Houston	WXF 709
Sherman DPS	Howe	KCY 568

?TDC?	Huntsville	KLB 390
?TDC?	Huntsville	KLA 773
Kerrville DPS	Kerrville	KCS 508
(? obsolete license ?)	Lampasas	KFO 761
Laredo DPS	Laredo	KAS 430
?	Laredo	KMA 804
TABC	Longview	WXF 718
Lubbock DPS	Lubbock	KKB 489
?	Lubbock	KXE 555
TABC	Lubbock	WXF 721
Lufkin DPS	Lufkin	KKH 775
TABC	McAllen	WXF 704
?McAllen DPS?	McAllen	KVT 812
?	Midland	KXA 479
Midland DPS	Midland	KKS 896
?TDC?	Midway	KKZ 763
Mineral Wells DPS	Mineral Wells	KEP 588
Stephen F. Austin State Univ.	Nacogdoches	KAN 757
Lampasas DPS	Nix	KGY 212
?UT/Permian Basin?	Odessa	KDU 555
TABC	Odessa	WXF 716
Ozona DPS	Ozona	KSO 940
TABC	Paris	WXF 723
Pecos DPS	Pecos	KKD 397
?	Pecos	KFO 688
Pierce DPS	Pierce	KUZ 831
Waco DPS	Ross	KKC 523
San Angelo DPS	San Angelo	KKA 451
TABC	San Angelo	WXF 714
?Angelo State Univ.?	San Angelo	KVN 820
(mobile command post statewide temporary bases)	San Antonio	KKM 304
San Antonio DPS	San Antonio	KKI 413
?SAC? or?UTSA??	San Antonio	KDU 562
" "	San Antonio	KDU 563
TABC	San Antonio	WXF 708
?TDC?	Sandy Point	KKG 638
?TDC?	Sugarland	KKD 278
?TDC?	Sugarland	KSV 771
Sulphur Springs DPS	Sulphur Springs	KJW 750
?TDC?	Tennesse Colony	KJQ 982
Texarkana DPS	Texarkana	KYL 815
Tyler DPS	Tyler	KKI 414
?	Tyler	KZC 479
?UT/Tyler?	Tyler	WXP 559
TABC	Victoria	WXF 706
Victoria DPS	Victoria	KKQ 736
?	Waco	KXZ 546
TABC	Waco	WXF 715
?TDC?	Weldon	KKG 640
Wichita Falls DPS	Wichita Falls	KKE 241
?	Wichita Falls	KZT 393
TABC	Wichita Falls	WXF 724
DPS	statewide temporary	KKM 304
TABC	statewide temporary	KMA 335
??? (50 bases ??)	statewide temporary	KIU 529

Turning attention now to the Texas Parks & Wildlife Dept, new information has been received concerning its radio facilities across the state. Once again David Litsinger, TX-32, has submitted a radio map depicting the P&W facilities. Again many thanks to Dave for his great research efforts. Meanwhile I have uncovered a P&W region and district boundary map and have had a special research performed for FCC forestry licensed radio stations in the state. I have correlated all the information together and came up with a roster of P&W repeaters across the state and I have updated the map Dave submitted to show any repeaters on the P&W's own list of repeaters but not depicted on their map. Hopefully this effort will be of use to the Texas members. I have also made a roster of state parks using radios. Any confirmation and/or corrections would be appreciated.



TEXAS PARKS & WILDLIFE
DEPARTMENT

Regions and districts

Roster of Texas Parks & Wildlife Repeaters

The following are the known or suspected Parks & Wildlife Dept radio facilities across the state. This list has been compiled from various sources and co-ordinated together thus explaining some of the remarks aside some listings wherein some of the data conflicts with each other. The majority of the data comes from either a P&W document on their radio system or from FCC license files.

F1 refers to the repeater output frequency of 159.270. The symbol "CO" stands for control and refers to the base stations operating on the input frequency of 151.265. The number in the relay # column refers to the "dial on" code needed to turn on a specific repeater station. This number will be commonly refered to in the course of a conversation between two or more mobile units or between a base and a mobile. These numbers are depicted on an accompanying map showing the locations of the various repeaters around the state. The map comes from a P&W document and has been changed to reflect any errors found between it and the P&W's own station list and the FCC license files.

Region	Location:	County:	Relay #	F1 callsign	Remarks & CO callsign, where issued:
6	Abilene	Taylor	162	KJV 348	relay depicted in Callahan Co. on map
6	Andrews	Andrews	?	KQM 652	(see Frankel City)
6	Adrian	Oldham	143	KLR 309	
6	Alanreed	Gray	142	KLR 310	depicted in Dewley Co.
10	Alice	Jim Wells	148	KRW 221	
1	Alpine	Brewster	144	KAR 834	
6	Amarillo	Potter/ Randall	(see Happy)		KKT 60
4	Angleton	Brazoria	124	KGP 784	
5	Asherton	Dimmit	?	KKT 616	possibly decommissioned and/or expired license
3	Athens	Henderson		X	WJJ 74
9	Austin	Travis	164	KDK 645	WRH 40 also has intercity 155.370 KXA 481
1	Barnhart	Irion	147	call u/k	possibly expired license or changed to Ozona
4	Beaumont	Jefferson	125	KGP 627	KHI 93
1	Big Lake	Reagan	134	KAR 829	
6	Big Spring	Howard	174	KJV 412	
1	Black Gap Wildlife Management Area	Brewster	127	call u/k	(see Marthon)
7	Boerne	Kendall		X	KYT 34
8	Boston	Bowie	179	KJN 395	
6	Bovina	Parmer	168	KQP 541	
5	Bracketville	Kinney	139	KCX 422	
2	Bridgeport	Wise	132	KGP 607	
10	Brownsville	Cameron	(see Los Fresnos)		KZF 63
7	Brownwood	Brown	165	KDZ 321	KJZ 42
9	Bryan	Brazos		X	KVE 39
7	Burnet	Burnet	157	KDT 326	
9	Caldwell	Burleson	142	call u/k	(see Chriesman)
6	Canadian	Hemphill	178	KQY 666	
5	Carrizo Springs	Dimmit	146	KKI 678	
6	Childress	Childress		X	WAH 29
9	Chriesman	Burleson	?	KJN 658	(probably same as Caldwell)
8	Clarksville	Red River	175	KGP 778	
?	College Mound	?	?	KJK 657	possibly decommissioned as is not depicted on map or on list
10	Corpus Christi	Nueces	(see Riviera)		KZJ 52
1	Crane	Crane	?	KAR 835	not depicted on map or list-- possibly decommissioned ?
3	Crockett	Houston	168	KQY 664	
6	Crosbyton	Crosby	165	KYL 247	
8	Daingerfield	Morris	155	KDZ 494	

6	Dalhart	Dallam/ Hartley	159	KQL 897	
3	Dallas	Dallas		X	KUW 85
1	Del Rio	Val Verde	(see Juno)		KEW 95
5	Eagle Pass			X	KHX 21
2	Electra	Wichita	173	KBV 879	
1	El Paso	El Paso	(see Fabens ?)		KBF 77 & WBH 917
3	Engeling Wildlife Management Area	Anderson	149	call u/k	F1 license possibly expired?
2	Evant	Hamilton	166	KFN 544	
1	Fabens	El Paso	?	KAR 833	not depicted on map or list-- site possibly decommissioned???
5	Floresville	Wilson	138	KDN 514	expired??is listed on P&W list but not on FCC files
6	Fluvanna	Scurry	148	KLG 623	
3	Flynn	Leon	154	KFN 542	
6	Frankel City	Andrews	172	call u/k	probably same as Andrews license
7	Fredericksburg	Gillespie	159	KDN 515	
6	Fritch	Hutchinson	167	KQL 719	depicted in Capson Co.
1	Ft Stockton	Pecos	199	KCX 421	
2	Ft Worth	Tarrant	(see Grapevine)		KHQ 64
2	Gainsville	Cooke	169	KUP 338	
4	Galveston	Galveston		X	KYU 21
10	George West	Live Oak	163	KJR 322	
10	Goliad	Goliad	177	KJR 321	listed as "F1 Base" (=BR?)
6	Goodlett,	Hardeman	166	call u/k	(see Quanah)
2	Granbury	Hood	163	call u/k	(see Tolar)
2	Grapevine	Tarrant/ Dallas	147	KKQ 347	
10	Gregory	San Patricio	123	KJR 320	
6	Happy	Swisher/ Randall	122	KRG 663	
5	Hebbronville	Jim Hogg	132	call u/k	(see Petroleum)
3	Henderson	Rusk	137	call u/k	(see Pinehill)
2	Henrietta	Clay	152	KQT 839	
2	Hillsboro	Hill	143	KJI 440	#134 added to map as was not depicted on map but was on list
4	Houston	Harris	(see San Jacinto and Sugarland)		KZJ 51
9	Huntsville	Walker	(see New Waverly)		WBJ 937
3	Jasper	Jasper	136	KFO 894	
7	Johnson City	Blanco		X	WBH 919
7	Junction	Kimble	135	KKE 356	KEW 97
1	Juno	Val Verde	185	KCX 426	
8	Karnack	Harrison	143	KJK 658	
8	Kaufman	Kaufman	163	call u/k	F1 license possibly expired??
7	Kerrville	Kerr	189	call u/k	KFL 79 #189 added to map-- not on map but is on list
1	King Mtn	Upton	156	call u/k	F1 license possibly expired??
6	Knox City	Knox	158	KLP 898	
9	La Grange	Fayette	(see Weimar)		WAN 927
5	Laredo	Webb	145	call u/k	WQM 33 F1 license possibly expired???
5	La Salle County		167	KJY 918	listed as La Salle with county being understood. Licensed as Fowlerton
7	Leakey	Real	184	call u/k	F1 license possibly expired?
3	Livington	Polk	153	KJK 544	
10	Los Fresnos	Cameron	186	KBV 822	
6	Lubbock	Lubbock			KKT 59
3	Lufkin	Angelina	126	KDZ 492	KJW 30
1	Marathon	Brewster	?	KAR 831	(see Black Gap--possibly same)
7	Menard	Menard	176	KQJ 698	
1	Midland	Midland	145	KAR 830	KBF 74
?5	Mines Road	?Webb?	158	call u/k	location guessed at judging from map. Possibly expired license.

7	Morton Valley	Eastland	153	KJS 724		
8	Mt Pleasant	Titus	(see Daingerfield)		KAP 75	
5	New Braunfels	Comal	174	KDN 437		
9	New Waverly	Walker	182	KJV 321		
2	Olney	Young	172	KBV 878		listed but not depicted on map #172 was added to map
1	Ozona	Crockett	?147?	KRG 904	KHT 59	Not shown on map and F1 possibly decommissioned ? or it is the #147 location depicted?
2	Palo Pinto	Pinto Pinto	124	KLX 811		
5	Pearsall	Frio	129	KJK 616		noted as an F1 Base (=BR?)
1	Pecos	Reeves	155	KCX 419		
6	Perryton	Ochiltree	177	KQP 542		
5	Petroleum	Jim Hogg	?	KJL 537		probably same as Hebbronville
10	Pharr	Hidalgo	142	KLG 626	KCG 90	CO license possibly expired ?
4	Pierce	Wharton	147	KJU 216		
3	Pinehill	Rusk	?	KGP 629		
7	Pontotoc	Mason/ San Saba	167	call u/k		possibly expired license and also is depicted in San Saba Co
4	Port Lavaca	Calhoun	?184?	KLJ 271		depicted on map as #157
6	Quanah	Hardeman	?	KLK 583		probably same as Goodlett
6	Quataque	Briscoe	?	KQY 663		probably same as Silverton
10	Rachal	Brooks	183	KFO 282/KFR 372		why two licenses ??
10	Raymondville	Willacy	?	KBV 953		possibly decommissioned ?
1	Rim Rock	?Hudspeth??	175?	call u/k		possibly correct location and also possibly expired license
5	Rio Grande City	Starr	153	KJZ 964		
10	Riviera	Kleberg	162	KJU 214		
10	Rockport	Arankas		X	KZJ 50	
7	Rocksprings	Edwards	?177?	KCX 418	KEW 97	CO callsign given as Junction on FCC files but listed as Rocksprings on P&W list and depicted as #133 on map.
10	Rudolph	?Kenedy?	152	call u/k		possibly expired license
3	Rusk	Cherokee	?133?	call u/k	WQS 52 / F1	possibly expired and also shown on map but not listed
?	Rural	?	?	KEY 863		possibly decommissioned ??
1	San Angelo	Tom Green	136	KAR 832	KBF 75	depicted on map in Coke Co.
5	San Antonio	Bexar	?188?	KBF 545	KRF 55	F1 shown on map but not listed
3	San Augustine	San Augustine	135	KJK 699		
1	Sanderson	Terrell		X	KNN 75	
4	San Jacinto) State Park/) Baytown)	Harris	146	(see below) ?KLJ 272	KLZ 47/ WJZ 47	((Baytown P&W also has ((intercity license (listed as Baytown KXA 430
1	Shafter	Presido	187	KCX 423		
1	Sheffield	Pecos	126	KCX 425		depicted on map as bit east of actual city location
8	Sherman/Howe	Grayson	144	KFN 543		licensed to Howe
9	Shiner/ Gonzales	Lavaca/ Gonzales	128	(see below) KQY 662		listed as Shiner but licensed and depicted on map as Gonzales
1	Sierra Diablo Game Management Area	Culberson	125	(see Van Horn)		
6	Silverton	Briscoe	127	call u/k	(see Quitaque)	
7	Sonora	Sutton	137	KCY 567		
6	Stamford	Jones	138	KLG 625		
4	Sugarland	Ft Bend	122	KGP 628		
8	Sulphur Springs	Hopkins	156	KKV 338		
6	Sunray	Moore	134	KQM 651		
6	Sweetwater	Nolan	154	KLG 624		
5	Tarpley	Bandera	175	KDN 513		

9	Temple	Bell	127	KDV 847	KJQ 27 CO license possibly expired
2	Tolar	Hood	?	KLZ 208	probably same as Granbury
1	Toyahvale	Reeves	132	call u/k	possibly expired license? and depicted on map in Jeff Davis Co.
8	Tyler	Smith	145	KDZ 490	KJW 29
5	Uvalde	Uvalde	178	KRC 741	
1	Van Horn	Culberson	?	KCX 420	(see Sierra Diablo-probably same)
4	Victoria	Victoria		X	WGO 59
2	Waco	McLennan		X	KSX 59 CO license possibly expired
9	Waller	Waller	165	KJN 657	
9	Weimar	Colorado	155	KJK 656	
6	Welch	Dawson	173	KQL 796	
6	Whitharral	Hockley	123	KQY 665	
2	Wichita Falls	Wichita	(see Electra)		KLL 32
	statewide	-----			KA 4579 (mobiles)
	statewide	-----			KL 3109 (for resident base sets)

MISC Texas Forestry Allocated Freqs

(obtained from FCC files--agency using these freqs are unknown and amount of activity on these freqs, if any, is unknown)

Location licensed/County		Callsign	Frequency
Amarillo	Potter	KWO 303	159.225
Dallas	Dallas	KIZ 672	159.24 & 159.465
Dallas	Dallas	KTB 293	159.465
Eagle Pass	Maverick	WBJ 919	151.325
Ft Worth	Tarrant	KVR 967	151.37 & 159.375
Laredo	Webb	KWT 763	159.315
Rio Grande City	Starr	KYE 200	159.315
Weslaco	Hidalgo	WAG 998	151.325
statewide mobile	----	KT 2330	151.325

Texas State Parks Radio Facilities

Name	Location	Callsign	Frequency
Bastrop State Park	Bastrop	KCN 213	151.34
Eisenhower State Park	Denison	KRG 631	31.22
Garner State Park	Concan	KRI 608	31.22
Hueco Tanks State Park	nr El Paso	KXU 242	151.34
Huntsville State Park	Huntsville	KSK 977	151.34
Lake Brownwood State Pk	Brownwood	-----CB-------	(not confirmed by author)
Lake Somerville State Pk	Somerville	KSS 294	151.34 (Birch Creek)
" " " "		KSS 295	151.34 (Nails Creek)
Martin Dies Jr State Pk	Jasper	KFR 635	151.34
Palo Duro State Park	Palo Duro	KLA 997	159.36
Pedernales State Park	Johnson City	KVR 883	151.34
?Texas State Railroad?	Palestine	KCS 461	151.34
Texas State Railroad	Maydelle	KUS 596	151.34
" " "	Rusk	KFP 494	151.34
Sea Rim State Park	Sabine Pass	KZC 493	151.34
Tyler State Park	Tyler	KTN 272	151.34 (licensed as Hawkins)

The following were obtained from FCC license files. These may be decommissioned or may be active. Information on present status of these facilities are desperately needed!

Possibly used at:	Location licensed:	Callsign	Frequency
Abilene State Park	Buffalo Gap	KSM 231	31.22
Cleburne State Park	Cleburne	KSS 297	31.22
Davis Mtns State Park	Ft Davis	KSM 232	31.22
Jasper State Park	Jasper	KFR 634	151.34

Public Safety — Central — continued

Caddo Lake State Park	Karnack	KYD 884	31.22
Inks Lake or Longhorn State Park	Kingsland	KSS 296	31.22
Lake Corpus Christi State Park	Mathis	KTB 292	31.22
(unknown)	Rural	KYD 885	31.22
?Stephen F. Austin State Park?	San Felipe	KRZ 344	31.22
Lake Whitney Recretion Area	Whitney	KSM 233	31.22

ILLINOIS, INDIANA, MICHIGAN, WISCONSIN BY JOHN ARENDT

Greetings-and welcome to the "expanded" version of this column. Remember that I'll now be covering MI (Michigan), so I'll be looking forward to those letters, post cards, etc. with your "news and views". There's a lot of material to cover in this May column - so on to the "mailbag!".

Now that spring is in full swing, the first contribution this month comes from Chuck (IL-141) down in far southern IL. He's gotten tired of replacing antennas and masts as a result of windstorms, etc. - so he now uses a double antenna mast. (Say a piece of 1½" mast outside of a piece of 1¼" mast). This might be the answer to those members that have vast antenna arrays on roofs, etc.

SUMMARY OF FEB. 7th CHICAGO AREA CHAPTER MEETING The meeting was called to order at 1330. Twenty eight members and guests from IL and WI were present. The following agenda items were discussed:

1. Opening remarks and announcements by moderators Ed Sirovy and Jee Vinci.
2. Brandt Niemuth's report on his Chicago Area freq. project.
3. Our special guest - Chief Richard Eastham of the Bellwood, Il. P.D. - spoke on police dept. operations. This was followed by a short question and answer session.
4. John Arendt's report to the membership about upcoming newsletter changes, other RCMA chapter doings, and microfiche files.
5. Round table discussion amoung the members.
6. Dinner hour break was followed by informal discussion.

You're all reminded that the June meeting has been rescheduled to Sunday, the 14th in order to accomodate the "RCMA Spring Festival" being held in the St. Louis area on the 6th.

In other area RCMA chapter news, - I've received a request from Dave (IN-002) - the "moderator" of the Ohio Valley Chapter which would cover the southwestern IN, southeastern IL, and northwestern KY areas. Dave needs your support to make the chapter "go". (At this writing, there has been little activity due to lack of member participation). True - the membership in these areas is smaller and fairly scattered, but the occasional chapter meetings would be a fine way to meet and greet fellow members, swap freqs., and ideas, and provide social pleasantries that are experienced in active chapters around other areas of the country. How about a little support for Dave and his energetic venture. Interested members should contact: Dave Nugent, 2542 Birk Dr., Jasper, In. 47546, 812-482-2352.

LIVINGSTON & FORD COUNTY IL. S.D. FREQS. With the demise low-band operations in northeastern IL (as I've been reporting over the last few months), only a handful of counties still maintain regular 39MHZ operations. Under the old operating plan, base transmissions occur on 39.50 with mobiles replying on either 39.50 or some other selected 39MHZ freq. Car-car traffic is always on 39.50.

A) Livingston County mobiles:
F1 39.50 RX, 39.50 TX
F2 39.50 RX, 39.66 TX

B) Ford County mobiles:
F1 39.50 TX, 39.50 TX
F2 39.50 RX, 39.34 TX
Both bases and mobiles retain the 42.50 receive capability for communication with I.S.P. units. Intersystem base traffic ("point") is still on 39.46. Contributed by Harold (IL-092). EDITOR'S NOTE: The Ford County transmitter is well heard over the entire northeastern part of the state. I've received it in a car and occasionally on a H/H unit at a distance of better than 85 miles.

IROQUOIS COUNTY, IL NEW S.D. FREQS. Per Martin (IL-125), operations are now being conducted on 155.535 rptr. out (158.910 in) and on 155.775 rptr. out (??? in). Call sign KKC670 is assigned. Limited operations are still being conducted on the old 39.50 low-band freq. and intersystem traffic still is found on 39.46.

WHITESIDE, IL COUNTY COMMUNICATIONS. Mike (IA-011) has sent in a rather detailed listing of freqs. in use plus mobile units. First to the frequencies:
F1 154.740 rptr. out (155.730 in)
F2 154.740 simplex
F3 155.730 vehicular rptr. out (158.970 H/H in)
F4 unknown (Editor's guess 154.800)
F5 unknown (Editor's guess 154.890)
F6 155.685 Sterling P.D.
F7 155.010 Rock Falls P.D.
F8 155.475 ISPERN
F9 154.190 Fire Depts.
F10 155.100 Civil Defense

Now - to the mobile unit designations. Dave (IL-002) has also supplied these in a previous communication.

WH-80 Sheriff	WH-84 Duty Sgt.
WH-91 Chief Deputy	WH-85 to 87 Patrol Cars
WH-82 Juvenile Officer	WH-88 & 89 Detectives
WH-83 Civil Processor	

ST-1 to 99 Sterling City Cars, RF-1 to 99 Rock Falls City Cars
There are some additional mobile unit designations that will appear at a later date (misc. units plus municipal units)

CHAMPAIGN, IL AREA LAW ENFORCEMENT MOVING TO U.H.F. Sam (IL-048) reports that the Champaign County S.D. is now using 453.150 rptr. for its operations. Sam also advises that "METCAD" operations (Champaign and Urbana P.D.'s) will also be moving to a new 453MHZ freq. sometime in the near future. (EDITOR'S NOTE: University of IL P.D. operations are already on 453.900 rptr.)

QUAD CITIES AREA NEWS Courtesy of the "Iowa Mikes" (IA-007 and IA-011).
1. Silvis, IL. The police dept. can be found on 155.895. Public works now uses 453.55 base and 458.55 mobiles. (There is cross-channel capability between the PD on 155.895 and the public works base on 453.55).
2. Even though 155.055 is licensed and used by the Quad-City Airport for security and maintainence operations, the neighboring Mercer County SD is authorized to operate on the freq. (911 purposes?)

MISC. CHICAGO SUBURBAN FREQS. With the high concentration of law enforcement agencies filling the police freqs. in the Chicago area, use of the local govt. freqs. for law enforcement purposes (even the "Yack" channels for ordering food, etc.) is on the rise. Members have sent in loggings as follows:
Harwood Heights - 155.085 alternate police freq. as reported by Rich (IL-129)
Cary - 155.88 police freq. as reported by Scott (IL-054)
Gurnee - 153.92 police freq. as reported by Scott (IL-054)
Scott also reports that 155.835 is used by buses in Elgin.

ATTENTION, RCMA MEMBERS . . .

The positions of PRESIDENT, FIRST VICE PRESIDENT, and SECOND VICE PRESIDENT of the RADIO COMMUNICATIONS MONITORING ASSOCIATION are open for nomination.

Any RCMA member in good standing is eligible to run for office. All candidates run for the office of President; the individual receiving the most votes becomes President, the individual with the next highest vote becomes First Vice President, and the individual with the third highest vote becomes Second Vice President.

The term of office is two years.

All nomination papers must be returned to RCMA, P.O. Box 4563, Anaheim, CA 92803 USA, by June 1, 1981. Please use the 'Petition for President' form printed below.

All candidates must have the signatures of six RCMA members who support their nomination for office.

PETITION FOR PRESIDENT
RADIO COMMUNICATIONS MONITORING ASSOCIATION

I, _____, RCMA Member No. _____, would like to place my name on the ballot, and if elected, would serve as President or 1st/2nd Vice President.

Signature _____

CANDIDATE'S STATEMENT:

NOMINATION SUPPORTERS:

Signature	RCMA No.	Signature	RCMA No.

WAUCONDA, IL P.D. & F.D. OFFBEAT FREQ. Scott (IL-054) advises that the strange freq. of 159.285 has been observed with local operations for police and fire depts. Call sign KEM449 has been observed by Scott for P.D. operations. (EDITOR'S NOTE: The freq. is allocated for "conservation" use - call sign KAR420 with a base and 6 mobiles licensed to the Wauconda Park Dist.)

MISC. SOUTHERN IL FREQS. Courtest of Chuck (IL-141):
1. The Marion, IL local govt. freq. of 154.965 widely used for various applications. Already observed are the P.D., the Memorial Hospital, and even doctor's paging.
2. The Carterville, IL P.D. has three freqs. available: 39.50 "low-band"; 154.845 "high-band"; and 155.07 (liaison with Williamson County SD).

MC HENRY COUNTY, IL FIRE FREQS. from Scott (IL-054). Although 154.250 is licensed for county fire operations as such, the Woodstock F.D. can be found on 154.100 for local dispatch purposes. The Huntley F.D. - previously not listed in "Police Call" - can be found on the 154.250 county freq.

NEW VEHICULAR RPTRS. FOR SOUTHERN IL UNIVERSITY - EDWARDSVILLE Courtesty of fellow editor Mike Redman (MO-002): The former low-power "call box" freq. of 453.025 was authorized and now appears as "Channel 4" in the existing 4-channel portables. When on the main campus, the portable has full access to the normal mobile relay system (453.900 rptr. out, 458.900 rptr in) or to local office control bases when used in the 453.025 simplex mode away from the main campus. The 453.025 simplex mode can be used for surveillance operations at the main campus without tieing up the mobile relay system.

MISC. E. ST. LOUIS, IL AREA FREQS. Again, my fellow editor Mike (MO-002) comes to the rescue with the following results:
1. Belleville, Il uses 155.490 (the old police freq.) for fire dept. pagaing.
2. E. St. Louis, Il uses 154.980 for civil defense and civil defense paging.
3. Brighton, Il uses 155.715 for fire dept. papging.
4. Washington Park, Il uses 155.835 for paging and police purposes.
5. Most "hospital to ambulance" traffic is now found on 155,160 instead of the well-known 155.340.

INDIANA STATE POLICE NEWS from Dave (IN-002):

A. New frequency plan being implemented throughout the state: 42.12
42.12 "Car to Car", 42.16 "Tactical Channel" (used for special details, bank robberies, plane details, etc.)
42.26 "Car to Post", 42.42 "Post to Car" (EDITOR'S NOTE: Dist. 13 - Lowell is believed to be excluded, as 42.12 "Post to Car" and "Car to Car" and 42.16 "Car to Post" are currently in use).

B. Misc. unit designations include:
56 - State Excise Police (alcohol violations)
61 - Communications Division (includes headquarters supervisory units, district technicians, microwave maintainence technicians, and communications officers.
62 - Communications Section (district police dispatchers)
89 - District Laboratory Technicians

INDIANA SHERIFF'S DEPT. NUMBERING SCHEME Mark (IN-014) advises that many of the smaller IN counties use an easy unit numbering system. Alphabetical order is used - beginning with Adams (1) and ending with Whiteley (92). Some of the most frequently heard include:

6	Boone	8	Carroll
9	Cass	18	Delaware (also 9 and R)
25	Fulton	27	Grant
33	Henry	35	Huntingdon
37	Kosciusko	48	Madison
52	Miami	70	Rush
80	Tipton	85	Wabash (also S)
90	Wells	91	White
92	Whitley		

Other counties not using the alphabetical order scheme identify strictly by name. Most larger counties do not use this system.

VARIATIONS IN THE INDIANA HWY. COMMISSION FREQ. PLAN (as previously reported in this column): Mark also advises that the Wabash Sub District uses 47.28 for bases and mobiles, while 47.36 is used for "point-to-point". Warsaw and Bluffton Sub District use only 47.36 for all operations (bases, mobiles, and point-to-point).

GRANT COUNTY, IN. S.D. OPERATIONS Mark (IN-014) advises that dispatching is simulcast on "Ch. 1" (155.130/154.890) and on "Ch. 6" (154.785). Mobile units have also been observed on the Marion PD rptr (154.725 out, 154.650 input).

FULTON COUNTY, IN E.M.S. OPERATIONS Mark also notes that 155.955 is used for dispatch and hospital-ambulance traffic. The base ID's as "Woodlawn Base" KDZ745.

SOUTH BEND, IN P.D. OPERATIONS Three UHF rptrs. are in use: F1-453.650, F2-453.625, and F3-453.575. Officers use low-powered portables that are inserted into "mobile chargers" while in a car. Each "charger" is e/w external mike, speaker, and antenna. Five satellite rcvrs. are scattered throughout the city.

What I've done is save the bad news for last - again! D.V.P. COME TO CHICAGO P.D. Mike (IL-014) reports that "coded radios" are now being employed for surveillance operations. The "bursts of static" - apparently a form of digital voice protection - can be turned on or off at will. (It looks like we're going to be stuck with this nasty stuff - whether we like it or not. Let's hope that someone can come up with an inexpensive way to unravel this noise - sure would be a nice Christmas present for every club member!)

With that comment, May's column comes to an end.

Happy Monitoring!

PUBLIC SAFETY - WEST

Send Public Safety and Special Emergency frequencies, radio system details, and questions for Alaska, Arizona, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming to: George Hoggatt, 17473 E. 16th Drive, Aurora, CO 80011.

First a personnel note. To everybody who has sent in data, thank you, keep it up. To the members who have written or called me, have patience. My boss panicked and I have been working 6 days a week, up to 10 hours. That doesn't leave much time. By the time you read this, the panic should be about over. I will be in touch.

An incident happened in February that will not help monitoring in Arapahoe County Colorado. Six burglars/robbers went to a house in unincorporated Arapahoe County south of Aurora late in the evening of February 20th. Four went inside and handcuffed the husband. The other two remained in the car outside, monitoring the Sheriff's radio. Apparently they didn't know that the wife was also in the house. She managed to get to the neighbors and call the Sheriff. The two bad guys in the car notified the four in the house when the call was aired. Fortunatly, the Sheriff's Deputies arrived just as they were leaving. A very wild chase ensued. (I listened to it.) Numerous shots were fired by both sides. Nothing was hit except the get away car and a new house under construction. All six have been arrested. I hope this doesn't become popular with the criminal element.

BASE	MOBILE	TYPE	REMARKS
STATE OF IDAHO (from Mike (CA-OR-? formerly ID-001))			
460.025	465.025	PP RP	State Police Ch. 1
see list below		PP RP	State Police Ch. 2 primary district channel
none	465.275	PP MO	State Police Ch. 3
none	465.400	PP MO	State Police Ch. 4

--Idaho State Police District Primary Channel Assignments--

DIST.	CITY	BASE	MOBILE	DIST.	CITY	BASE	MOBILE
1	Coer d'Alene	460.100	465.100	4	Twin Falls	460.200	465.200
2	Lewiston	460.200	465.200	5	Pocatello	460.100	465.100
3	Boise	460.100	465.100	6	Idaho Falls	160.200	465.200

460.300	465.300	PP RP	State narcotics
155.760	155.760	PL BM	State prison (Boise)
159.39	?	PO	Fish and Game in Boise
159.33	?	PO	Fish and Game in Twin Falls
?	159.315	PO MO	Fish and Game car to car

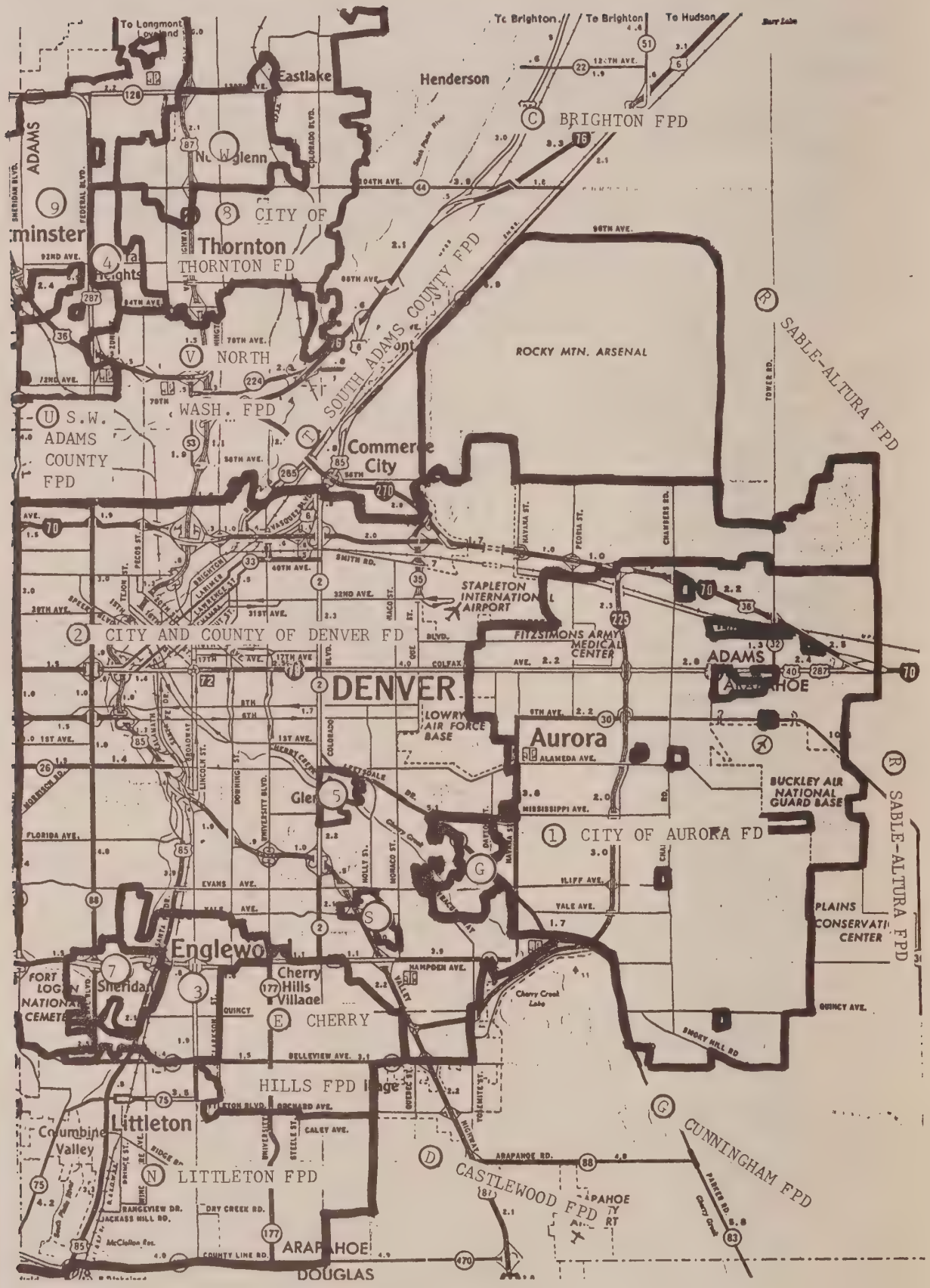
Now for my input for the month, a pair of maps showing the fire departments in the Denver area.

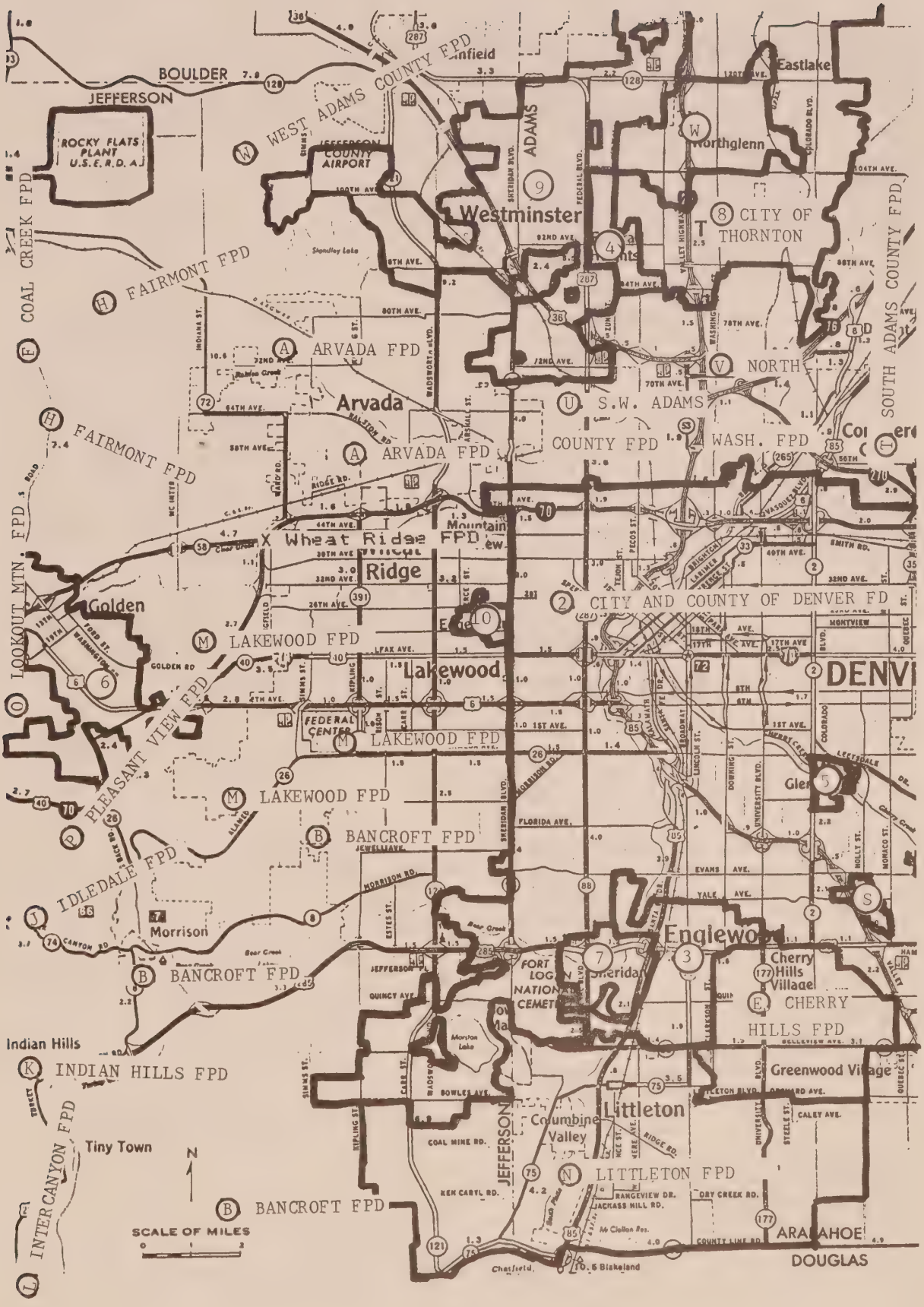
CITY ONLY DEPARTMENTS
1-Aurora 154.100
2-Denver 154.310, 154.070
3-Englewood 154.160
4-Federal Heights 453.575
5-Glendale 453.250
6-Golden 155.835
7-Sheridan 158.760
8-Thornton 460.600
9-Westminster 460.625
10-Edgewater 154.445

FIRE PROTECTION DISTRICTS
A-Arvada FPD 453.150, 453.550
B-Bancroft FPD 154.220
C-Brighton FPD on ADCOM fire 3
D-Castlewood 154.235
E-Cherry Hills FPD on Englewood Fire
F-Coal Creek FPD on Jeffco + Boulder
G-Cunningham FPD 46.500
H-Fairmont FPD 154.385
J-Idledale on Jeffco
K-Indian Hills FPD on Jeffco
L-Inter-canyon FPD on Jeffco
M-Lakewood FPD 154.190
N-Littleton FPD 154.340
O-Lookout Mtn. FPD on Jeffco
P-Pleasant View FPD on Jeffco
R-Sable-Altura FPD on ADCOM fire 2
S-Skyline FPD on Cunningham
T-South Adams County FPD on ADCOM fire 1
U-S. W. Adams County FOD on ADCOM fire 3
V-North Washington FPD on ADCOM fire 2
W-West Adams County FPD 46.480
X-Wheat Ridge FPD 46.120

Areas surrounded by Denver southwest are in the Bancroft FPD. Areas surrounded by Aurora north are in Sable-Altura, south are in Cunningham. The area between Littleton, Sheridan and Englewood, west of Santa Fe Dr. is "no mans land".

Note the new frequencies for the Arvada FPD


To Longmont
To Brighton
To Brighton
To Hudson
Eastlake
Henderson
C BRIGHTON FPD
ADAMS
9
8 CITY OF
Thornton
THORNTON FD
SOUTH ADAMS COUNTY FPD
ROCKY MTN. ARSENAL
R SABLE-ALTURA FPD
V NORTH
WASH. FPD
U S.W.
ADAMS
COUNTY
FPD
T
Commerce
City
STAPLETON
INTERNATIONAL
AIRPORT
2 CITY AND COUNTY OF DENVER FD
FITZSIMONS ARMY
MEDICAL
CENTER
ADAMS
2 DENVER
LOWRY
AIR FORCE
BASE
Aurora
BUCKLEY AIR
NATIONAL
GUARD BASE
1 CITY OF AURORA FD
PLAINS
CONSERVATI
CENTER
Englewood
7
Sheridan
3
Cherry
Hills
Village
177
E CHERRY
HILLS FPD
Littleton
Columbine
Valley
N LITTLETON FPD
D CASTLEWOOD FPD
G CUNNINGHAM FPD
ARAPAHOE
DOUGLAS


BOULDER
JEFFERSON
ROCKY FLATS PLANT U.S.E.R.D.A.
WEST ADAMS COUNTY FPD
JEFFERSON COUNTY AIRPORT
Westminster
ADAMS
Eastlake
Northglenn
CITY OF THORNTON
SOUTH ADAMS COUNTY FPD
COAL CREEK FPD
FAIRMONT FPD
ARVADA FPD
Arvada
S.W. ADAMS COUNTY FPD
WASH. FPD
NORTH
LOOKOUT MTN. FPD
Golden
Wheat Ridge FPD
Mountain View
Ridge
CITY AND COUNTY OF DENVER FD
LAKEWOOD FPD
Lakewood
PLEASANT VIEW FPD
FEDERAL CENTER
BANCROFT FPD
IDLEDALE FPD
Morrison
Englewood
Cherry Hills Village
CHERRY HILLS FPD
Indian Hills
INDIAN HILLS FPD
Greenwood Village
Littleton
Columbine Valley
LITTLETON FPD
Tiny Town
INTER CANYON FPD
ARAPAHOE
DOUGLAS
SCALE OF MILES

NEW MEXICO STATE POLICE (from Jerry (NM-004))

155.565	155.655	PP BM	District 1 Santa Fe
155.580	155.635	PP BM	District 2 Las Vegas
155.565	155.655	PP BM	District 3 Roswell
155.520	155.535	PP BM	District 4 Mesilla Park
155.520	155.535	PP BM	District 5 Albuquerque
155.790	155.730	PP BM	District 6 Gallup
155.565	155.655	PP BM	District 7 Espanola
155.790	155.730	PP BM	District 8 Alamogordo
155.520	155.535	PP BM	District 9 Clovis
155.790	155.730	PP BM	District 10 Farmington*
155.580	155.685	PP BM	District 11 Socorro

* This does not match the frequencies reported by Fred (NM-005) last month. Can anyone confirm which is correct?

LAS VEGAS NEVADA AREA (from W.T. (NV-009) a very nice list)

159.150	154.770	PP RP	Ch. A Records, other local law enforcement agencies, Municipal Court baliffs, Nevada Parole and Probation simulcasts with 453.250
159.090	154.710	PP RP	Ch. B Dispatch west of Interstate 15
158.850	156.210	PP RP	Ch. C Car to Car simulcasts with 453.650
158.745	154.980	PL RP	Ch. D Dispatch east of Interstate 15 including downtown
159.210	155.730	PP RP	Ch. E Car to Car
159.030	155.550	PP RP	Ch. F Dispatch south of Sahara Blvd.
158.790	?	PP RP	Ch. G
158.970	154.740	PP RP	Ch. H Car to Car, Detectives
158.940	?	PP ?	Multi-agency coordination (mutual aid) including LVMPD (Las Vegas Metropolitan Police Dept.) and EMS control
155.370	156.030	PP RP	?
460.200	465.200	PP BM	MCT (Mobile Computer Terminal) dispatch
453.250	458.250	PP RP*	Rural areas records access
453.650	458.650	PP RP*	Rural areas car to car
453.000	458.000	PP RP	LVMPD use unknown
453.450	458.450	PP RP*	?
155.070	155.070	PP BM	LVMPD simplex
158.820	158.820	PL BM	LVMPD simplex

* LVMPD has control and mobile units licensed on these frequencies, Clark County has fixed repeaters licensed (these are different from a two-way repeater)

453.150	458.150	PF RP	Las Vegas City FD Dispatch
453.400	458.400	PF RP	Las Vegas City FD Dispatch
154.340	153.770?	PF RP	Las Vegas City FD hand held and mobile at major fire scene only (ed. note-licensed by Clark County)
453.700	458.700	PF RP	Clark County Fire Dispatch
453.100	458.100	PF RP	Clark County Fire some Dispatch very weak

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42.880	42.880	PP BM	Nevada Highway Patrol Ch. 4 primary dispatch
	42.700	PP MO	NHP car to car ch. 3
42.580	42.580	PP BM	NHP car to car. GB units are the Gaming Control Board units, which operate, with a microwave link, to the state capital, Carson City.
42.780	42.780	PP BM	NHP car to car
42.940	42.940	PP BM	NHP car to car, some dispatch. Interstate link to the California Highway Patrol (Barstow CA on 42.340) and the Arizona Department of Public Safety (Flagstaff Dispatch on 460.475, District 1, Kingman District via a transmitter called Christmas Tree in Nevada near Boulder City.)

LVMPD RADIO CODES (ed. note-copied just as it appears)

I.D.F.
(INCIDENT DISPOSITION FUNCTION CODE)
(DISPOSITIONS NEEDED)

CODE	DESIGNATION
401	Accident (traffic)
401A	Hit and run
401B	Accident (with injury)
401C	Accident (private property)
402	Fire
402A	Arson
402Z	Attempt arson
403	Prowler
404	Unknown trouble
405	Suicide
405Z	Suicide attempt
406	Burglary
406A	Burglary alarm
406Z	Attempt Burglary
407	Robbery
407A	Robbery alarm
407Z	Attempt robbery
408	Drunk
409	Drunk driver
410	Reckless driver
411	Stolen motor vehicle
411A	Recovered motor vehicle
412	Misplaced vehicle
412B	Abandoned motor vehicle
413	Person with a gun
413A	Person with a knife
413B	Person with other deadly weapon
414	Grand larceny
414A	Petit larceny
414B	T.F.M.V.
414C	Larceny from person (not a robbery)
414Z	Attempt larceny
415	Assualt
415A	Assualt with a gun
415B	Assualt with cutting device
415C	Assualt with other weapon
416	Fight
416A	Disturbance juvenile
416B	Disturbance other
417	Family disturbance
418	Lost person
418A	Found person
418B	Runaway Juvenile
419	Dead body
419A	Drowned person
420	Homocide
420A	Murder/non-negligent homocide
420B	Manslaughter
420Z	Attempt homocide
421	Sick or injured person
421A	Mentally ill person
422	Sick or injured officer
423	See a man for information
423A	See a woman for information
424	Riot
425	Suspicious circumstances
425A	Suspicious person(s)
425B	Suspicious vehicle
426	Rape
426A	Statutory rape
426Z	Attempt rape
427	Kidnap
427Z	Attempt kidnap
428	Child molest
428Z	Attempt child molest
429	Indecent exposure
430	Animal bite
430A	Live animal
430B	Dead animal
430C	Animal complaint
431	Found property
431A	Lost property
432	Fraud
432A	Forgery
432B	Counterfeit
433	Stolen property
434	Illegal shooting
434A	Illegal dumping
435	Embezzlement
436	Attempt to locate
437	Keep the peace
437A	Assist a citizen
438	Traffic problem
439	Detailed (non-criminal assignment)
440	Wanted subject
441	Vandalism
442	Airplane crash
442A	Emergency landing
442B	Possible plane down
443	Assist an officer
444	Officer needs help
445	Bomb threat
445A	Bomb
445B	Bound or abandoned explosives/ blasting caps
446	Reference narco information/ investigation
447	Civil matter

I.D.F.
(INCIDENT DISPOSITION FUNCTIONS CODE)
(DISPOSITIONS NOT NEEDED

DISPOSITIONS

A. Arrested
B. Citation issued
C. Report taken
D. Station report
E. Refused to sign complaint
F. Unfounded
G. Dispatch cancelled
H. Gone on arrival
I. Unable to locate
J. Settled at scene
K. Detail completed
L. Handled by other jurisdiction
M. Warning and/or subjects advised
N. No disposition (back up)
O. False alarm - guard at scene
P. False alarm - no guard at scene

ADMINISTRATIVE SEGMENTS

480 Vehicle out of service for maintenance or radio repair (give location)
481 Property watch (give location)
482 Lunch (give location)
483 Coffee stop (give location)
484 Court (give location)
485 Stake out (give location)
486 Firearms range (give location)
487 Out of service, vehicle stop (give location)
488 Out of service, person(s) on foot (give location)
489 Bar and/or perimeter check (give location)
490 Non-specific down time (give location)
491 Subpoena/summons
491A Warrent/mental
492 Prisoner in vehicle (give destination)
493 Investigation/follow-up (give location)
494 Out of unit/on portable radio (give location

GLOSSARY

THE FOLLOWING WORDS ARE TO BE USED BY ALL PERSONNEL AS STANDARD OPERATIONS TERMINOLOGY WHEN USING THE RADIO

Acknowledge	Enroute	Secured
Affirmative	Expedite	Stand by
Arrived	Negative	Time check
Clear	Records check	Wants check
Copied	Registration check	Request wrecker
Emergency traffic	Repeat	Request ambulance

The word "SCOPE" refers to the LVMPD records computer.
ed. note - code 414B T.F.M.V. has to mean Theft From Motor Vehicle

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ARIZONA DEPARTMENT OF PUBLIC SAFETY more from the fine contribution from Karl (CA-OR-022)

RADIO CODES

10-1 Receiving poorly
10-2 Receiving well
10-4 Okay
10-5 Relay
10-6 Busy
10-7 Out of service
10-8 In service
10-9 Repeat
10-10 Out at _____
10-11 Dispatching too rapidly
10-12 Official/visitor present
10-13 Road conditions/weather
10-14 Convoy/escort
10-15 Prisoner
10-16 Insane person/caution
10-17 Papers/package
10-19 Return/proceed to enroute
10-20 Location
10-21 Telephone
10-24 Trouble at station
10-27 Driver's license check
10-28 Vehicle registration check
10-29 Stolen/wanted check
10-30 Contrary to regulation
10-35 Confidential information
10-36 Correct time
10-37 Name of operator
10-38 Is party our of hearing range?
10-40 Stolen vehicle
10-42 Officer at home
10-43 No traffic
10-45 Meet the unit at _____
10-46 Any traffic
10-50 Payroll check

ALL OTHER SITUATIONS WILL BE COVERED BY USING PLAIN LANGUAGE

PUBLIC SAFETY - CALIFORNIA

Send Public Safety and Special Emergency frequencies, radio system details, and questions for California to: Eric Christensen (CA–LA–045), 3146 W. Ball Road, Apt. 35, Anaheim, CA 92804.

VERDUGO CHANNEL DESIGNATIONS AND FREQUENCIES

DISPATCH	46.1000	WRB451	DISPATCH SYSTEM CHANNEL/DATA AND MODAT CONTROL
TAC ONE	153.8900	KME279	PRIMARY DISPATCH AND BUSINESS CHANNEL
TAC TWO	153.7700	KME279	SECONDARY TACTICAL CHANNEL
TAC THREE	154.3400	KM5922	L.A. COUNTY FIRE DEPARTMENT F-2 "VALLEY" CHANNEL
TAC FOUR	154.2035	KME279	THIRD TACTICAL CHANNEL/AIRPORT RESPONSES
TAC FIVE	154.2800	KME279	STATEWIDE MUTUAL AID NET "WHITE" CHANNEL
TAC SIX			AREA "C" & "D" COMMAND AND MUTUAL AID CHANNEL
TAC SEVEN	153.8300	KM5922	PORTABLE RADIO CHANNEL
TAC EIGHT	33.9800T-154.1600R	KPB67	STATE OF CALIFORNIA O.E.S. CHANNEL 1
TAC NINE	33.6600T-154.2200R	KPB67	STATE OF CALIFORNIA O.E.S. CHANNEL 2
TAC TEN	155.3400	KME279	HOSPITAL EMERGENCY ADMIN. RADIO SYSTEM (HEAR)
TAC ELEVEN	154.4300	KME279	L.A. COUNTY FIRE DEPARTMENT F-1 "L.A." CHANNEL
TAC TWELVE	47.4200	KME279	AMERICAN NATIONAL RED CROSS
TAC THIRTEEN (PROPOSED)	154.400	KM5922	L.A. COUNTY FIRE DEPT. F-3 "ANTELOPE" CHANNEL

WE WILL IDENTIFY AS "VERDUGO" ON ALL CHANNELS UPON WHICH THE BASE STATION IS LICENSED TO TRANSMIT. EXCEPTION: WHEN TALKING POINT-TO-POINT WITH ANOTHER FIRE AGENCY ON "TAC 5", WE WILL I.D. WITH "BURBANK," "GLENDALE," OR "PASADENA."

STATION 11 — 353 E. OLIVE, BURBANK
ENGINE 11
ENGINE 11A (75' TELESQURT)
TRUCK 11
BRUSH 11
BATTALION 1
ENGINE 111

STATION 12 — 644 N. HOLLYWOOD WAY, BURBANK
ENGINE 12
ENGINE 121
TRUCK 121

STATION 13 — 2244 N. BUENA VISTA, BURBANK
ENGINE 13
SQUAD 13

STATION 14 — 2305 W. BURBANK BL., BURB.
ENGINE 14 — (BACK-UP PARAMEDIC RIG)
TRUCK 14
SQUAD 141

STATION 15 — 1420 W. VERDUGO AVE., BURBANK
ENGINE 15
SQUAD 15

STATION 16 — 1600 N. BEL AIRE, BURBANK
ENGINE 16
ENGINE 161

STATION 21 — 210 S. ORANGE, GLENDALE
ENGINE 21 — (A TWO-PIECE COMPANY CONSISTING
TRUCK 21 — OF WAGON 21, A 1500 GPM ENGINE
BATTALION 2 — WITH 50' TELESQURT AND PUMP 21
AIR UTILITY 21*, A 1250 GPM ENGINE)

STATION 24 — 1734 CANADA, GLENDALE
ENGINE 24
BRUSH 24
PATROL 24 — (4WD BRUSH PATROL PICKUP W/PUMP)

ENGINE 25 — 353 N. CHEVY CHASE, GLENDALE
ENGINE 25

STATION 26 — 1145 N. BRAND, GLENDALE
ENGINE 26 — (A TWO-PIECE COMPANY BASICALLY
TRUCK 26 — IDENTICAL TO ENGINE 21)
BRUSH 26

STATION 27 — 1127 WESTERN, GLENDALE
ENGINE 27
BRUSH 271

STATION 28 — 4410 NEW YORK, GLENDALE
ENGINE 28 — (HIGHWAY HIGHLANDS AREA)

STATION 29 — 2465 HONOLULU, GLENDALE
ENGINE 29 — (MONTROSE AREA)
TRUCK 29
BRUSH 29
TRUCK 291
UTILITY 29

STATION 31 — 175 N. MARENGO, PASADENA
ENGINE 31
TRUCK 31
RA31 — (RESCUE AMBULANCE-PARAMEDIC)
PATROL 31 — (2WD PICKUP W/SKID PUMP, USED
UTILITY 31 — FOR FIRES AT THE PLAZA PASADENA)

STATION 32 — 2424 E. VILLA, PASADENA

* MOBILE AIR CACHE, ACID SUITS, EXTRA AFFF FOAM, ETC.

STATION 22 1505 S. BRAND, GLENDALE
ENGINE 22
ENGINE 221
WATER TENDER 22 (A 1,250 GALLON TANKER, CURRENTLY, AND POSSIBLY PERMANENTLY OUT OF SERVICE.)

STATION 23 3303 E. CHEVY CHASE, GLENDALE
ENGINE 23

ENGINE 32
TRUCK 32
RA32
SALVAGE 321

STATION 33 515 N. LAKE, PASADENA
ENGINE 33
SALVAGE 33
ENGINE 331
TRUCK 331
DEFENSE 39

STATION 34 541 S. OAK KNOLL, PASADENA
ENGINE 34

'STATION' 35 817 MOUND, SOUTH PASADENA
RA35
RA341 *SEE NOTE AFTER STATION LISTINGS*

STATION 36 1435 N. RAYMOND, PASADENA
ENGINE 36
ENGINE 361

STATION 37 3430 E. FOOTHILL, PASADENA
ENGINE 37
ENGINE 371

STATION 38 1150 LINDA VISTA, PASADENA
ENGINE 38

STATION 39 50 AVENUE 64, PASADENA
ENGINE 39 (DRY CHEMICAL, FOAM, & PURPLE-K)
ENGINE 391

*RA35 IS A SOUTH PASADENA FIRE DEPARTMENT AMBULANCE STAFFED BY PASADENA PARAMEDIC DIVISION PARAMEDICS. THEIR INITIAL RESPONSE AREA INCLUDES ALL OF SOUTH PASADENA AND A PORTION OF THE SOUTHERN PART OF PASADENA. ALL RA'S WILL RESPOND INTO EACH OTHERS DISTRICTS IF THE NORMAL FIRST-IN RA IS UNAVAILABLE.

EQUIPMENT WITH A THREE DIGIT NUMBER LIKE ENGINE 212, BRUSH 271, TRUCK 331, ARE RESERVE EQUIPMENT.

LISTING OF ADMINISTRATIVE/SUPPORT PERSONNEL/EQUIPMENT CALL LETTERS:

STAFF 1	BURBANK FIRE CHIEF
STAFF 2	GLENDALE '' ''
STAFF 3	PASADENA '' ''
STAFF 11	BURBANK ADMINISTRATIVE BATTALION CHIEF
STAFF 21	GLENDALE '' '' ''
STAFF 31	PASADENA '' '' ''
PREVENTION 1	BURBANK FIRE PREVENTION BATTALION CHIEF
PREVENTION 2	GLENDALE '' '' '' ''
PREVENTION 3	PASADENA SENIOR FIRE PREVENTION INSPECTOR
TRAINING 1	BURBANK TRAINING OFFICER (BATTALION CHIEF)
TRAINING 2	GLENDALE '' '' (CAPTAIN)
TRAINING 3	PASADENA TRAINING CONSULTANT
REPAIR 1	BURBANK MECHANIC
REPAIR 2	GLENDALE CHIEF MECHANIC
REPAIR 21	GLENDALE MECHANIC
ALARM 1	BURBANK BOX ALARM MAINTENANCE CONTRACTOR
COM 2	GLENDALE FIRE COMMUNICATIONS SUPERVISOR
COM 21	VERDUGO FIRE COMMUNICATIONS PERSONNEL
UTILITY 2	GLENDALE FIRE DEPARTMENT STOREKEEPER
MEDICAL 3	PASADENA CHIEF PARAMEDIC
MEDICAL 31	PASADENA PARAMEDIC COORDINATOR

3F44	PASADENA ARSON INVESTIGATORS
INVESTIGATOR 26/27	GLENDALE ARSON INVESTIGATORS
DEFENSE 2	GLENDALE CIVIL DEFENSE DIRECTOR
DEFENSE 3	PASADENA EMERGENCY SERVICES DIRECTOR
DEFENSE 35	RED CROSS REPRESENTATIVE
DIRECTOR 3	PASADENA PUBLIC SAFETY AGENCY DIRECTOR (POLICE CHIEF)
COM 3	COMMUNICATIONS REPAIR SUPERVISOR (PASADENA)
AIR 100	GLENDALE POLICE HELICOPTER
PD-1	PASADENA POLICE HELICOPTER

UNITS WITH SUBSEQUENT NUMBERING (I.E., PREVENTION 11, PREVENTION 23, COM 22, ETC.) DENOTE OTHER UNITS IN THAT FIELD, GENERALLY IN DECLINING ORDER OF AUTHORITY. THAT IS, COM 2 IS IN CHARGE OF THAT DIVISION, COM 21 IS NEXT IN CHARGE, THEN COM 22, ETC.

OUR SYSTEM ENJOYS A 'BOUNDRY DROP' SYSTEM WHEREIN EQUIPMENT FROM MORE THAN ONE CITY WILL RESPOND ON A FIRST ALARM ASSIGNMENT. FOR INSTANCE, ON A BRUSH FIRE IN THE LINDA VISTA OR SAN RAFAEL HILLS, A TYPICAL RESPONSE WOULD BE E23, E38, E25, E24, B24, BC2. THIS HAPPENS THE MOST IN THE SAN RAFAEL HILLS, THE SCHOLL CANYON AREA, AND WEST GLENDALE/EAST BURBANK.

IN THE EAST PASADENA AREA OF L.A. COUNTY, PASADENA FD WILL BE RESPONDING AN ENGINE AND TRUCK (32) ON ANY STRUCTURE FIRES, AND ENGINE 32 ALONE WITH LA COUNTY ENGINE 5 ON SINGLE COMPANY RESPONSES. ON STRUCTURE FIRES IN THIS AREA, COUNTY WILL ALSO SEND ENGINE 5, ENGINE AND PATROL 66, SQUAD 47, AND BATTALION 10. AS A RECIPROCAL MEASURE, COUNTY WILL SEND ENGINE 12, ENGINE 282, TRUCK 82, AND BATTALION 4 ON STRUCTURE FIRE IN THE 'FLORECITA FARMS' AREA OF EXTREME NORTHWEST PASADENA, ALONG WITH PASADENA ENGINE 36 AND BATTALION 3. IN THE PAST IN THIS AREA, ENGINE 36 WOULD BE SCREAMING TO A STRUCTURE FIRE IN THIS AREA AND DRIVE BY COUNTY STATION 12 AND WAVE AT THE COUNTY GUYS STANDING AROUND THE STATION. THIS WILL GO INTO EFFECT IN THE VERY NEAR FUTURE. OPERATIONS IN THESE AREAS WILL PROBABLY BE ON TAC 5, 154.280.

L.A. COUNTY AND GLENDALE HAVE AN INITIAL ACTION AGREEMENT WHEREIN MANY AREAS OF THE COUNTY IN AND AROUND LA CANADA-FLINTRIDGE, A GLENDALE ENGINE (23, 28 OR 29) WILL RESPOND WITH THE COUNTY ON ALL STRUCTURE AND BRUSH FIRES. IN RETURN, A COUNTY ENGINE WILL RESPOND INTO GLENDALE WITH GLENDALE ON STRUCTURE AND WILDLAND FIRES IN THE BORDERLINE AREAS. COUNTY IS ALSO VERY, VERY COOPERATIVE ABOUT SENDING FULL BRUSH ASSIGNMENTS, CREWS, AND COPTERS INTO GLENDALE ON A MOMENTS NOTICE TO HELP US OUT ON OUR VERY, VERY FREQUENT BRUSH FIRES.

BURBANK, THOUGH NOT YET IN THE SYSTEM, IS SCHEDULED TO JOIN ON MARCH 4. THEY HAVE BEEN SCHEDULED TO JOIN ALMOST MONTHLY SINCE SEPTEMBER, 1979, THOUGH MARCH 4, 1981 FINALLY SEEMS A PLAUSIBLE DATE. THE DELAY HAS ENSUED IN THE INSTALLATION OF SOME PARTS IN THEIR STATION RECEIVER BY MOTOROLA. IN BURBANK, THERE ARE A NUMBER OF 'TARGET' HAZARDS; DISNEY STUDIOS, BURBANK STUDIOS, LOCKHEED AIRCRAFT, AND THE BURBANK-GLENDALE-PASADENA AIRPORT (FORMERLY THE HOLLYWOOD-BURBANK AIRPORT.) AN INTERESTING FREQUENCY TO MONITOR IS 158.295 MHZ, WHICH IS USED BY THE LOCKHEED FIRE DEPARTMENT, BURBANK AIRPORT SECURITY, AND SOME OTHER AIRPORT MAINTENANCE PERSONNEL. LOCKHEED FD IDENTIFIES AS 'FIRE DISPATCH', JUST AS BURBANK FD DOES NOW. THEIR UNITS IDENTIFY AS ENGINE 1, CRASH 1, CRASH 2, ETC. THE FREQUENCY IS QUITE ACTIVE, AND BURBANK FD RESPONDS ON VIRTUALLY ALL CALLS THAT LOCKHEED FD DOES. I HAVE FOUND THIS FREQUENCY TO BE MUCH, MUCH MORE ACTIVE THAN THE 155.205 FREQUENCY LISTED IN 'POLICE CALL'. THE SIGNAL IS QUITE STRONG; AT MY HOME IN PASADENA, WHEN NO T USING AN OUTSIDE ANTENNA, I CAN BARELY RECEIVE BURBANK FD (BECAUSE OF THE SAN RAFAEL HILLS) BUT LOCKHEED FD, BURBANK AIRPORT OPERATIONS (AND BURBANK FD UNITS) COME IN QUITE STRONG. I DON'T HAVE THEIR FCC CALL SIGNS, THEY USE AN AUTOMATIC CQ IDENTIFIER.

L. T. B. M. U. - California's Phantom Forest
by Gregory C. Currivan

You may have seen these initials before on frequency lists for the United States Forest Service. They stand for the Lake Tahoe Basin Management Unit which is an Administrative Unit established by the Forest Service in 1973 to manage all National Forest lands in the Lake Tahoe Basin. This includes all of the Lake Tahoe drainage and down the Truckee River, north of Tahoe City, as far as the Alpine Meadows turn off.

Prior to April of 1973, two Regional Offices and the Supervisor's Offices of the Tahoe, Eldorado and Toiyabe National Forests administered the National Forest lands through four District Offices. Today the LTBMU provides a single direction for management of the National Forest lands as well as a single voice to represent the Forest Service.

The administrative office of the LTBMU is located in South Lake Tahoe, California. As with many other Forests in California, fire management and recreation activities occupy the largest portion of budget and personnel. Thus necessitating a dedicated radio system of its own for the unit.

From a communications standpoint, I found the "Lake Tahoe", as is its radio call, to be very interesting in that the fire dispatcher has the ability to talk on six different radio networks using various sites at South Lake Tahoe (6263'), California; East Peak (9591')(in Heavenly Valley ski area) and Mount Rose (10166'), Nevada.

Lake Tahoe Basin Management Unit, United States Forest Service
South Lake Tahoe, California

Network Name	Recieve	Transmit	Location	Control	Notes
Basin	@171.575	171.575 172.375 r*1	South Lake Tahoe, CA	Local	
			East Peak, NV *2	@415.375 d*3 411.375 u	
Air Dispatch	@168.625	168.625 168.025 r*4	SLT, CA	Local	
Zone *5	166.5875	164.9375	Mount Rose, NV	@415.35 d*6 411.35 u	*7
Fire Cooperators' *9	@172.25	172.25	SLT, CA	Local	
			East Peak, NV	415.375 d*3 411.375 u	
California Fire Departments	@ 46.42	46.42	SLT, CA	Local	
Nevada Division of Forestry	@158.895	159.45	SLT, CA	Local	*8
Air Tactics Two	169.15				Pre-assigned

NOTES (*) AND SYMBOLS
d - Down link frequency
u - Up link frequency
r - Repeater input frequency
@ -
1 - Standard installation. No repeaters yet. Some sites under study.
2 - Dispatcher's options at East Peak: transmit on Basin or Co-op; receive on Basin, Co-op or scan both. Earlier design included access to two Eldorado National Forest nets. Feature discontinued because of high traffic levels on these nets. Replaced by hot line telephone to Supervisor's Office at

Placerville and cross monitor with scanner at South Lake Tahoe.
3 - Horizontal polarazation. Best reception on line between East Peak and South Lake Tahoe. Up link not repeated on down link.
4 - Standard installation. No repeaters in area.
5 - Northern California Fire Dispatchers' Network is a point to point fixed system. Headquartered at Redding, California. Radio call "North Zone".
6 - Down link repeats up link and 166.5875.
7 - Repeater: Saint John Mountain, Glenn County, California.
8 - Repeater: Snow Valley Peak (9214'), Nevada.
9 - Portable and mobile only network. Used by engines and agency commanders when working with Forest Service units.

GREGORY C. CURRIVAN, 1/81

SATELLITES

Bill Blomgren, Editor

Send information about satellite frequencies which you have received with type of traffic heard, orbital data, hobby receiving equipment and antennas and questions pertaining to satellite monitoring to: Bill Blomgren, 112 Sandra Lane, Normal, Il 61761.

With the conclusion of this month's column I will be stepping down as the RCMA satellite editor. I have enjoyed my association with the RCMA and look forward to being able to serve the club through regular contributions to a number of columns. I hope that over the past two years I have been able to expose you to a few of the many satellite systems currently in operation. Hopefully some of you may even try to monitor one of them.

Even though I am stepping down as the Satellite editor I will continue to be an active club member and will continue to study and monitor satellites. If I can offer any assistance to any of the membership, please feel free to contact me. I would again like to thank the entire RCMA membership for allowing me the priviledge of editing the RCMA Satellite column. I have greatly appreciated the support of the membership and would hope that this same support will be extended to the new editor of the Satellite column.

DSCS II

This month I received an interesting article from Chris Devendorf (CA-OR-050). The article was from the June 16, 1980, issue of Aviation Week and Space Technology and was entitled, "E-4B Boosts SACs Communication Net" The E-4B command post aircraft, as many of you know, is a Boeing 747 completely modified to act as part of the SAC Post Attack Command and Control System. This system more commonly referred to as PACCS consists of eight aircraft. According to the article the eight aircraft are made up of one E-4B command post aircraft, an eastern and a western auxiliary command post aircraft, three airborne launch control center aircraft, and two radio relay aircraft.

The E-4B aircraft can be easily identified by a bubble or Radome above the forward fuselage. This bubble houses a 33" computer controlled tracking dish. This dish is used to track the Defense Satellite Communications System Satellites (DSCS II) as the E-4B command post aircraft flys its daily missions. This satellite link operates in the 7 GHz super high frequency range and is used to keep the E-4B aircraft in constant contact with military installations throughout the world. Along with DSCS II access, the E-4B command post can also operate through the FLTSATCOM and AFSATCOM satellite systems and all other major military communications networks.

If your thinking of monitoring the DSCS II system and are expecting to hear clear voice, don't waste your time. To start with you will need a 7 GHz receiver and a good dish antenna. Currently a medium size DSCS II ground station transmits with an output power of 10 kilowatts and the dish antenna weighs about 82,000 pounds, not exactly your typical backyard antenna system. If you were able to monitor the 7 GHz range with sufficient gain to hear the satellites you would still be denied any clear voice

transmissions. All messages are set with high level scrambling and using a technique called "spread spectrum". The end result of this technique is that you would hear only a hissing noise on the channel.

SYSTEM HISTORY

Between 1966 and 1974 twenty-six satellites were launched to prove the effectiveness of a global defense satellite system. This first effort as you might guess was called DSCS I. In November of 1971 the second phase of this massive satellite program was begun with the launch of the first two DSCS II satellites.

Traditionally the DSCS II satellites have been launched in pairs. Unfortunately if you encounter a launch problem you end up losing two satellites. Shortly after the launch of DSCS II F_1 and F_2, both satellites failed. Since the November 1971 launch there have been a total of fourteen satellites launched. To date only six of these are operating at 100 percent capacity. These six satellites are DSCS II F_7, F_8, F_{11}, F_{12}, F_{13}, F_{14}. The DSCS II satellites F_1 through F_4 are no longer operating properly and DSCS II F_5, F_6, F_9, and F_{10} all burned up during reentry. As with the FLTSATCOM system it takes four satellites to cover the world. This leaves two DSCS II satellites as orbital spares.

Even with the high number of failures, the Defense Department is convinced that the DSCS program is a success. Currently the General Electric Company Space Division is under contract to provide prototype satellites for the latest phase of this program, DSCS III. These test satellites were to be launched during late 1980 or early 1981 by the space shuttle, but due to delays in the shuttle program the DSCS III launch date has been pushed back. Decisions are now being made to determine if the DSCS III satellites will continue to be designed around a space shuttle launch or if they will be designed for a more traditional launching.

Unlike the DSGS II, the new DSCS III satellites will carry some UHF equipment. Exactly what type is not known, but it would appear likely that a possible AFSATCOM transponder could be included. It would also appear likely that the downlink from such a UHF transponder would fall into the 240 - 270 MHz range. While this transponder may only be transmitting encrypted data it might be possible that other forms of communication (including voice) may also be placed on board.

ASSOCIATION OF NORTH AMERICAN RADIO CLUBS

NEWS HIGHLIGHTS

ANARC is a federation of the most responsible, well established radio listening clubs in North America. RCMA attained Full Member status in ANARC in 1977. For a list of the ANARC Member and Associate Member clubs send a self-addressed, stamped business size envelope with your request to the address below. For an annual subscription to the monthly "ANARC Newsletter" send $3.50 to: ANARC, 557 N. Madison Ave., Pasadena, CA 91101.

The "ANARC/HAP Guide to DX Listening" 1981 edition is due to be published in May 1981. The 1981 edition is a complete revision of the 1980 edition which sold out in six months.

May 22-25 EDXC conference Berne, Switzerland. For details send two IRC's to EDXC 81, P.O. Box 4, St Ives, Huntingdon, Cambs, PE17 4FE England.

July 17-19 ANARC Convention Thunder Bay, Ontario. For details ANARC 81, P.O. Box 142, Thunder Bay, Ontario P7C 4V5 Canada

July 31-Aug 2 WTFDA Convention Oklahoma City For details contact (w/SASE) John Zondlo, 1802 N. Rockwell apt 107, Bethany, OK 73008

Aug 20-23 IRCA Convention Calgary, Alberta.

CANADA

Send Canadian frequency information, radio system details, other information relating to Canadian monitor radio listening, and questions to: Robert Berezowski, 5832 Dalhousie Drive NW, Calgary, Alberta T3A 1T1 Canada.

In the January 1981 issue of RCMA in the U.S. military and federal government column some Canadian frequencies were published sent in by Michael (CAN-017). This has raised a problem. I don't think it was made clear to the membership, but I think it is best that ALL material related to Canada be sent to me. I will decide the best place to publish it. I must especially stress this for military and federal government frequencies. I can determine if the frequencies are classified or not and if they should be published. The frequencies in the January/81 RCMA should not have been printed. True, their publication will not bring the overthrow of our government, but I have to be on the conservative side when it comes to publishing possibly sensitive channels. I will publish the material if it is available to the general public in any form. If they are not available (i.e. CLASSIFIED) and they are published, it is impossible to say what will happen. If you have been following all the letters published in the newsletter in the last few months you will know that the legal situation regarding scanners here in Canada is very confusing. I personally believe that the scanner laws are not enforced as strong as they might be. If too many sensitive or classified frequencies are published, the consequences can be very bad.

These two frequencies should have been published last month, but they got lost in the shuffle.

Victoria, B.C.	Legislature Building Security	451.100
	Jubilee Hospital Security	158.535

Now for the bookworms among you I have some information on a few publications that are of interest. The first one I would highly recommend to those who are interested in railroad communications. It is the 1981 Canadian Railway Radio Guide published by Gansel Publications. It has a very comprehensive coverage of CN & CP as well as the other railroads across Canada. It also covers Canadian railroads that have operations in the U.S. and vice versa. As I said I would highly recommend it. It costs $5.00 (add 25¢ for first class mail) for Canadians. For Americans the cost is $5.00(US) and the exchange will be used to pay for airmail postage. The address for information and ordering is Gansel Publications, P.O. Box 1108, Niagara-on-the-Lake, Ontario L0S 1J0.

Another publication of note is the Radio Communications Guide by Steven Handler. It is mostly concerned with U.S. information and HF information, but it has a good selection of Canadian HF and VHF frequencies. It is available from Handler Enterprises Inc., P.O. Box 48, Deerfield, Illinois USA 60015.

J.B. Rae (CAN-019) has sent me a most interesting article on a mutual aid fire communications system on UHF in Quebec. It covers six cities on the Island of Montreal: Westmount, Town of Mount Royal, Outremont, St. Laurent, Town of Hampstead and Cote St. Luc. Gilles (CAN-004) has supplied the frequencies which the article did not. It is a most interesting system. From Gilles:

Mutual Aid System	Channel 1	(local frequency-see below)
	Channel 2	Mutual aid 412.4375/417.4375
	Channel 3	" " 412.4375/412.4375
	Channel 4	(St. Laurent only-simplex Ch. 1)
Saint-Laurent FD	XJK 963	(Ch 1) 412.8625/417.8625
Mount Royal FD	XJK 960	" 413.4125/413.4125
Outremont FD	XJK 959	" 413.3375/413.3375
Westmount FD	XJF 78	" 413.4875/413.4875

Cote St. Luc. FD XJF 191 (Ch. 1) 413.1625/413.1625
Hampstead FD XJF 36 " 413.2125/413.2125

Also from Gilles are the following frequencies for the Island of Montreal. All of these fire departments are not involved in the mutual aid system.

Montreal North FD XJF-511 159.450
Pointe Aux Trembles XJG-266 412.7125
Montreal East (dispatched through Pte. Aux Trembles) 412.7125
Saint Leonard XJF-447 Dispatch 412.2875
Tactical 413.0875
Anjou XJF-230 (dispatched by St. Leonard and uses the same radio frequencies)
Verdun XJF-81 156.150
Lasalle XJK-253 159.150
Lachine XJH-306 153.380
Dorval XJG-59 ?
Pointe Claire/ Beaconsfield/ Kirkland 412.1875
Pierrefonds XJJ-322/Roxboro XJF-263/Ile Bizard/Ste. Genevieve 155.370
Dollard des Ormeaux XJF-770 159.300
St. Anne de Bellevue XJI-262/Senneville XJG-24/Baie D'Urfee 156.090

Gilles notes that there are 28 cities on the Island of Montreal and the only mutual aid or intercommunication is the system that I mentioned above. For the Dorval FD they have abandoned the use of their old frequency but their new UHF frequency is unknown.

Gilles has also passed on the following:

Montreal Fire Dept. XJG-69 Dispatch Ch. 1 412.7625
Administration Ch. 2 412.4875
Tactical Ch. 3 413.2625

Gilles also provided a sheet that has a listing of all the fire stations for the Montreal Fire Dept. and apparatus at each station. Unfortunately I do not have the room in the column to print it. If any member would like a copy of this list, please write.

From Gilles as well here is a list of frequencies for the Fire Departments for South of the Island of Montreal:

Varennes XJG-672 411.1125
Boucherville/Sainte Julie XJF-552 153.770
Saint Bruno XJF-543 33.820
Saint Hubert XJF-75 151.235
Longueuil XJK-261 154.710
Greenfield Park XJF-94 154.860
Saint Lambert XJF-51 155.490
Brossard XJF-50 154.280
Laprairie 159.090
Candiac 412.5625
Mont Saint Hilaire 411.5625
Beloeil XJF-223 155.010
Contrecoeur 154.890
Caughnawaga (Indian Reserve) 159.120
Granby XJF-68 154.250
Valleyfield 159.210

North of the Island of Montreal Fire Departments

Laval XJF-586 142.935
Saint-Agathe 155.130
Saint-Adele/Esterel/Ste. Marguerite 159.390
Blainville XJH-224 159.420
Charlemangne 153.890
Deux Montagnes 155.070
Saint-Eustache XJJ-77 154.710
Mascouche XJF-860 154.860
Terrebonne 158.790

Gilles also passed along a program schedule for the weather station in Montreal on 162.550 MHz. Again I don't have room to

print it in the newsletter, but any member who wants a copy is of course free to write.

The following list is from Michael(CAN-017) who sent it into me quite a while ago but I am afraid to say it got lost in one of the many shuffles. Anyway here it is:

Beauport, PQ	Police/Fire Dept.	XJF-616	Ch.1 155.280
	"		Ch.2 155.610
Janier, PQ	Police/Fire Dept.	XJK-37	159.090
Charlebourg, PQ	Police/Fire Dept.	XJF-213	Ch.1 154.830
	"		Ch.2 155.370
	Public Works	XJJ-204	169.470
St. Foy, PQ	Police/Fire Dept.	XJG-91	Ch.1 158.730
	"		Ch.2 159.390
	Public Works	XJF-600	169.530
Quebec City, PQ	Fire Dept.	XJG-63	Ch.1 155.520
	"		Ch.2 154.250
	"		Ch.3 155.070
	"		Ch.4 154.890
	"		Ch.5 155.250
	"		Ch.6 154.980
	"		Ch.7 154.340
	Police Dept.	XJF-96	Ch.1 155.850
	"		Ch.2 154.770
	"		Ch.3 154.190
	"		Ch.4 155.830
	"		Ch.5 154.710
	Lepine Cloutier Ambulance	XNX-70	158.760
	Bouchard et Fils Ambulance		163.500
	Quebec Provincial Police	XJC-463	166.680
		XJC-394	166.500
		XJC-204	167.010
		"	167.040
	Public Works	XJK-940	169.590
		XJK-248	169.890
		XJK-248	169.290
	Taxi	XNC-26	150.845/162.480
	"		151.025/163.140
	Co-op Taxi	X0P-20	166.440
Loretteville, PQ	Fire Dept.	XJK-941	151.235
	Police Dept.	XJF-629	410.0125
Sillery, PQ	Police/Fire Dept.	XJG-57	155.970
	Public Works	XJJ-265	410.0375
Charney, PQ	" "	XJK-949	168.780
Province of Quebec	Civil Defence	148.655 148.685	148.810
	149.410	149.470 149.525	149.495
	154.570	167.880 171.600	

The following is a list of RCMP channels contributed by Guy (CAN-031). Guy has also sent in a lot of other interesting material that will probably be published in the next few months.

139.710 / 140.310	Montreal,PQ & Quebec, PQ
139.740	Drummondville,PQ & Dorval,PQ & Gaspe,PQ & Montreal,PQ & Quebec,PQ
139.800	Amos,PQ & Dorval,PQ & Drummondville,PQ & Gaspe,PQ & Granby,PQ & Quebec,PQ
139.800 / 140.730	Mt Tremblant,PQ
139.890	Ancienne Lorette,PQ & Chicoutimi,PQ & Dorval,PQ & Montreal,PQ
139.980	Amos,PQ & Ancienne Lorette,PQ &

	Chicoutimi,PQ & Dorval,PQ & Montreal,PQ
140.310 / 139.710	Bedford,PQ & Dorval,PQ & Gaspe,PQ & Drummondville,PQ
140.370	Montreal,PQ & Hampsted, PQ
140.670	Montreal,PQ & Ridgewood,PQ
140.730 / 139.800	Amos,PQ & Dorval,PQ & Ancienne Lorette,PQ & Granby,PQ
138.050	Ottawa,Ont
139.800 / 140.730	Plantagenet, Ont
138.045 / 142.035	Alta & Gordon, Man
138.050 / 143.535	Calgary,Alta & Sask
138.050 / 143.480	Vega, Alta & Goodeve, Sask
138.050 / 142.575	Morse, Sask
138.050 / 142.035	Sask
138.165 / 141.740	Bremner,Alta
138.350 / 141.740	Bremner,Alta
138.350 / 142.550	Man, & Sask & Alta
138.375 / 142.575	Goodeve,Sask
138.435 / 142.425	Alta & Sask
138.710 / 143.900	Calgary,Alta & Morse,Sask & Goodeve,Sask
138.710 / 143.720	Norgate,Man
138.765 / 142.425	Watrous,Sask

One last note before I close. This item appeared on the Broadcast News Wire Service and was passed on to me by Chris(CAN-061).

"North Bay--Four Northern Ontario Police Forces will be linked to a sophisticated computer system within three years. That announce ment was made yesterday by Preston Quirt, Deputy Chief of the North Bay Police Dept.

He said the linking of forces in North Bay, Sudbury, Sault Ste. Marie and Timmins will reduce duplication and costs of administration.

One phase of the project, to be completed in 1983, will include installation of computer terminals in police cars and the main terminal will be in Sudbury."

Well, that's all for this month. I need your help. If you have any material, please send it in. Untill next month, best wishes.

contact / info wanted

This column has two purposes: to help members contact each other, and to help members obtain information directly from one another on various subjects related to 2-way communications monitoring. If you desire to converse, meet, or correspond with other members by telephone, letter, or cassette tape in a certain geographic area or with members who have similar listening interests, this is the perfect place for you to make your desires known. Remember--those who respond will do so directly, so be sure to provide your phone number, the best time to be called, or your address.

Write to: John W. Darr, P.O. Box 1652, Cheyenne, WY 82001

SCRAMBLER TAPES: Kansas member wants casette tape recordings of scramblers used by police, fire, etc. He will copy the tapes and then return your original. Tapes will be used in an attempt to develop decoders. All types of scramblers are wanted, including DVP. [1-25-81]

STEVE JESTER (KS-Ø11), 1221 N. Olive, Wellington, KS 67152

BOSTON CHAPTER RCMA? Boston area member wishes to contact other members in area regarding the formation of a Boston-area chapter -- or to have informal meetings. [2-2-81]

MARK WOLFGANG (MA-Ø45), 63 Campbell Ave, Revere, MA 02151 // (617) 284-6443
6 p.m. - 10 p.m. EST

IRAC MICROFICHE: NY member wishes to borrow fairly recent set of IRAC microfiche to copy and return. Will guarantee rapid return, and negotiate payment for share of original expense. [2-5-81]

RICHARD PRELINGER (CA-SF-ØØ2), P O Box 438, Canal St Stn, New York, NY 10013

OHIO FREQS NEEDED: Member needs a variety of frequencies and information that pertain to Ohio -- especially to Erie and surrounding counties. Examples: code lists for Sandusky City and Perkins Township, Ohio State Patrol, Ohio Turnpike, Cedar Point, utilities such as telephone and electric companies, highway department, and railroads. Anything provided will be sincerely appreciated. [2-9-81]

DAVID J MYERS (OH-Ø41), 312 Main St, Castalia, OH 44824

"SENSITIVE" FREQS: Member wishes to exchange "sensitive" federal frequencies -- particularly those applicable to Pacific NW and Midwest areas. [2-18-81]

S. BAHNER (WA-Ø26), P O Box 1432, Olympia, WA 98507

ATTENTION: HAMS/RCMA NET: Indiana member desires to start one or more amateur radio nets on HF freqs. Interested members should contact him, indicating preferences as to bands, times, dates (days of week), and formats. All club members will be notified concerning net schedules upon completion of arrangements. Non-licensed RCMA members can gain much enjoyment and practical knowledge just by tuning in to the nets. [2-22-81]

DAVID A NUGENT (IN-ØØ2) KA9ELR (Advanced), 2542 Birk Dr, Jasper, IN 47546 // (812) 482-2352

?? SOUTHWEST U.S. ID ?? Can anyone positively ID the Army Range Control on 30.45 MHz? Locations mentioned include Brown's Creek, Blackwell, Sugarloaf. Possibly Texas (Central Time). [2-23-81]

G. DuBOIS (OR-ØØ1), 10048 NE Campaign, Portland, OR 97220

NEW YORK AIRCRAFT-PHILES: New York member would like to correspond with Nassau County and New York City members interested in aircraft and federal freqs. [2-25-81]

EDDIE MURO (NY-Ø41), P O Box 318, Woodmere, NY 11598

FBI LINK FREQ FREAK: Member has complete list, including exact locations of sites, of all FBI UHF links for Neward, NJ, and New York City Field Offices. He wishes to exchange for similar information regarding link operations in other 57 Field Office Districts. Exchange of information made free of charge; however, list will be mailed to anyone who covers his cost of duplication and mailing -- 50¢. [2-25-81]

TONY LOVING (NJ-ØØ5), 393 Grove St, Ridgewood, NJ 07450 // (201) 652-5252 evenings and weekends

KENTUCKY STATE POLICE FREQS: Kentucky members wants frequency information for Kentucky State Police, particularly for base-to-car communications. He can't locate! Will gladly reciprocate with any info possible [2-26-81]

JEFF HOWELL (KY-Ø23), P O Box 237, Milton, KY 40045

COAST GUARD FREQS: New Jersey member wishes to determine frequently-used U.S.C.G. frequencies in the area of New Jersey, New York, Long Island, and Connecticut. [2-28-81]

MARK S JANACEK (NJ-Ø77), 111 La France Ave, Bloomfield, NJ 07003

NEW YORK CITY AREA SOCIABLE MEMBER DIRECTORY! If you live in Nassau County, New York City metropolitan area, or southwest Connecticut, and would like to be included in the Long Island - New York City Sociable Member Directory, send your name, address, phone number, and a statement of your interests in the hobby to the address below. The directory might be used to form a NYC-RCMA Chapter. Information needed as soon as possible. Enclose an SASE for your copy. [3-3-81]

EDDIE MURO (NY-Ø41), R.C.M.A., P O Box 318, Woodmere, NY 11598

A FINAL THOUGHT: My thanks to more than a few of you who have responded to my two pleas for help -- a vexing interference on 154.8 MHz, and the air-to-air freqs for the USAF Thunderbirds. Now if I only had a scanner that could work that band! I'm finding the RCMA membership to be an interesting, talented, and capable group of folks. And a further note to any of you would-be editors: if you like to receive mail, and thereby meet a lot of well-informed people, volunteer to be an editor. The pay is lousy, but the fringe benefits are great! -88- ...Ed.

FCC TOPICS

George DuBois, Editor

Send FCC news and information of interest relating to two-way communications above 30 MHz, as well as questions regarding the FCC Rules and Regulations, to: George DuBois, 10048 NE Campaign, Portland, OR 97220.

The Police Radio Service

Probably the service which draws the most interest from scanner enthusiasts, the Police Radio Service is available to government entities which are authorized by law to provide their own police protection. Quite a chunk of spectrum is available, so I'll jump right in and give you the frequencies available.

First of all, on low-band are the channels from 37.02 through 37.42 in .02 mHz increments. 37.02, 37.34, 37.38 and 37.42 are only available for mobile use. The others are for bases or mobiles. 37.10, 37.18 and 37.26 are shared with the Local Government Radio Service. The next group of channels is from 39.02 through 39.98 mHz. 39.26, 39.30, 39.34, 39.38, 39.66, 39.70, 39.74 and 39.78 are for mobile use only. 39.06, 39.10, 39.18, 39.50, 39.58, 39.82, 39.90 and 39.98 are shared with the Local Govt. Radio Service. 39.06 is for low power use, with a two-watt limit. 39.46 is primarily for intersystem, or mutual aid, use. The channels from 42.02 through 42.94 in .02 mHz steps, and from 44.62 through 45.06 in .04 mHz steps are only available to state police licensees, although other police agencies may be licensed on them where coordination is required between agencies. 42.18-42.30, 42.66-42.78 and 44.78-44.90 are for mobile-only use. The last group, for any police agency, is from 45.10 through 46.02 in .04 mHz increments. 45.26-45.38 and 45.74-45.82 are for mobile use. 45.86 is for intersystem use.

Here are the high-band channels available:

154.650*	154.815	155.070	155.490	155.625	155.850*	158.790
154.710*	154.830*	155.130	155.520	155.640	155.910*	158.850
154.725	154.845	155.190	155.535	155.655	155.970*	158.910*
154.740	154.860	155.250	155.550	155.670	156.030*	158.970*
154.755	154.875	155.310	155.565	155.685	156.090*	159.030*
154.770*	154.890*	155.370	155.580	155.700	156.150*	159.090
154.785	154.950*	155.415	155.595	155.730	156.210	159.150
154.800	155.010	155.430	155.610	155.790	158.730	159.210

* - for mobile use

Plus, for assignment to state police licensees:

154.665	154.905	155.445
154.680	154.920	155.460
154.695	154.935	155.490

The frequency 155.475 is available for statewide emergency communications networks. Many states (such as Washington) that still operate on this channel have until 1985 to change frequencies.

In the UHF bands, channels from 453.050 through 453.950 in .050 mHz steps are available and are shared with other services. The mobile-only frequencies are 5 mHz higher. Also, the channels from 460.025 through 460.500 in .025 mHz steps. 460.525, 460.550, 462.950 and 462.975 are available for non-voice use. The 462 channels are only available until 1986 if they were licensed before 1976. 460.525 and 460.55 will be the channels for non-voice use, but are now shared with the Fire Radio Service until 1986. T-band channels (470-512) in the ten largest urban areas are from the Public Safety pool (see Jan. column). The mobile units are 3 mHz higher. And finally, channels are available in the 851-866 mHz band, including frequencies recently set aside exclusively for Public Safety use. Mobile units are 45 mHz lower.

For you shortwavers, there are a number of HF frequencies available. (This is my token effort in this direction. I don't know about the rest of you, but I thought I joined a scanner club!) But I don't think you'll find much use in this service anymore. The channels are from 1610 through 1730 kHz in 8 kHz increments and another group around 2400 kHz. (If you want these, send me a self-addressed postcard.) 5135, 5140, 5195, 7480, 7805 and 7935 kHz are available for zone and interzone stations using CW only. A zone is normally a state. The 7 mHz frequencies may only be used during daylight hours.

Repeaters are allowed in all bands (except HF), including mobile repeaters, where the radio in a vehicle retransmits from a handheld radio. Also allowed is digital modulation, either scrambled or unscrambled, and facsimile (teleprinters). Stations must identify every thirty minutes, in the clear mode, if scrambled. Also, if an agency is licensed in this Service, they are allowed the use of any of the above frequencies above 42 mHz for low power use (2 watts) for stake-outs, raids and other such activities. This is on a non-interference basis. If your local PD is doing this, you might check out vacant channels in the same band as their normal channels. (No constablery will buy a bunch of handhelds on VHF-lo for stake-outs if their regular channels are on UHF!) In this same vein, it's always a good idea to keep track of allocations in your area, to know which of the available frequencies are actually in use. If a repeater is used on VHF, find and note the input frequency (check the mobile-only channels first). This makes it easy to find new allocations, low power use and the like.

One other thing you may find is base stations operating simplex on the channels designated for mobile use only. This is done routinely if most of the base/mobile channels are used up and the licensee insures that no interference will occur. On low-band, the mobile-only channels are usually used for car-to-car or in a two-frequency simplex configuration, the base on one channel, the cars on another.

Another provision, just recently allowed, is the use of low power radio determination devices, or "beepers". A Police Radio Service licensee is allowed the use of these devices on any frequency available to any of the Public Safety radio services, except Special Emergency. Besides the Police Radio Service channels, this includes the 31 mHz Forestry-Conservation channels (see July 80 column), the 33, 47 and 151 mHz Highway Maintenance channels (see Jan. newsletter) and the Fire and Local Govt. channels. On UHF, this also includes the mobile (458 and 465 mHz) frequencies. Power is limited to the equivilant of 30 mw and operation is permitted for a maximum of ten days on one frequency. The use of battery life to accomplish this is permissible.

photo department

Send photographs of custom monitor listening posts, unusual or extensive monitor or two-way antenna systems, user station consoles (PD, Fire, Paramedics, etc.) or other monitor/two-way related equipment of interest. Photographs must be 3 by 5 inches or larger, black and white with good contrast, sharply focused and attractively composed. Each photo must be accompanied by details and explanations of equipment. Photos will not be returned. If you have questions, write first and please include an SASE. Send photos or write to: Mike Redman, P.O. Box 1177, St. Charles, MO 63301.

Here we have the unique installation of an RCMA Member in Illinois who wishes to remain anonymous. But take my word for it, this is really his installation, not a radio museum or store. All antennas are found in the attic and are run through preamps and splitters. Scanners include numerous and obsolete types like the Regency tube-type tuneables, original Bearcat scanners, Allied-Knight receivers, Sonar handheld units, the Bearcat Little Tiger and Clark converters, and more. Among the events monitored here were the 125 million dollar Mc Cormack Convention Hall fire, 2 crippling blizzards, '68 riots, '68 Democratic Convention, the A & P Fire, two plane crashes at O'Hare and more. Yes, this member listens to over 50 radios simultaneously and not shown here is the Sony Color TV, Zenith B/W TV, National NC57B, or the Regency/ Bearcat installation in the basement bathroom. Now in the other photo is the remainder of the installation, located to the right of the impressive structure above. Here we see 2 pieces of McKay Dymek gear for BC and HF DXing, and a Sony AM/FM unit. Maybe in a future issue this fellow will tell us how to avoid intermodulation and cross-channel interference with so many radio units operating at once. Now how about sending in your photo to the familiar PO Box? I'll be waiting to print your photo here in the Photo Column.

FEDERAL GOV'T and ☆ MILITARY ☆

Robert B. Grove, Editor

Send all Federal Government and Military frequencies (including those of military aircraft), radio system details, and related questions to: Robert B. Grove, Route 1—Box 156, Brasstown, NC 28902. Sensitive frequencies will not be published. Coast Guard material must go to the VHF Marine editor.

ANTENNA POINTING AIDS: For those ardent enthusiasts who like to chase the distant ones, two sources of computer-generated azimuthal charts are worthy of mention.

For satellite chasers, Ruch Hood provides a table of bearings from your location for precise antenna pointing at all commercial geostationary birds. For information, write Hood's Lightworks, PO Box 1026, Beaverton, OR 97005.

Bill Johnston, N5KR offers a computer-drawn azimuthal-equidistant global map for taking bearings on foreign LF and HF targets. Like the satellite chart, Bill's map is custom-drawn for your location. Write N5KR, 1808 Pomona Drive, Las Cruces, NM 88001.

FEDERAL GOVERNMENT AT 800 MHZ? Many of our members think that such allocations have been made there, but so far not one discrete frequency or agency has crossed this desk. Anyone out there have some positive information? IRAC (Interdepartment Radio Advisory Committee

.....the federal government's "FCC") has been trying to get authorization in that part of the spectrum for some time, and supposedly a small portion of the band is assigned to the government on a secondary basis. Any help on this puzzle would be appreciated.

BUMPER BEEPERS: The FCC has authorized the use of low-power tracking transmitters emitting their tiny chirps on police allocations.

SPREAD-SPECTRUM TRANSMISSIONS: SECURE COMMUNICATIONS Several agencies are already using this new means of encryption to avoid interception, and the FCC is considering the general use to avoid frequency congestion.

Spread spectrum techniques involve the spreading-out of a signal over a wide band to diminish the concentration of power on any one discrete frequency, thus reducing interference. It sounds like a slight increase in background noise at worst, and several users may transmit simultaneously on the same center channel without fear of mutual interference.

PUZZLED ABOUT WHICH SHORTWAVE RECEIVER TO BUY? Larry Brookwell, San Diego DX'ers Club, offers an equipment review of dozens of popular and exotic receivers for only $4.95. A good investment to diminish the possibility of wasting hundreds or even thousands of dollars on the wrong receiver. Write for the Equipment Review at 1826 Cypress St., San Diego, CA 92154.

HIGH-BAND IMAGE INTERFERENCE ON UHF: Due to internal mixing in your scanner, strong VHF high band signals are often heard as interfering images on the UHF band. To solve the riddle of where the original frequency is, use the general equation (VHF Freq. X 3)-(2 X IF). On a Bearcat, assuming an IF of 10.8 MHz, an example would be: 152.54 mobile telephone tones heard on 436.02 MHz (152.54 X 3 -- 21.6 = 436.35.

To reverse the equation and discover what high-band frequency is giving the grief to UHF, simply: UHF Freq. + 2 X IF $\div$ 3; therefore, if you are picking up a weather broadcast on 465.6, it is because 465.6 + 21.6 $\div$ 3 = 162.40.

THE BEACON GUIDE Yes, several other editors have previously mentioned this book, but for the dyed-in-the-wool frequency collector, this 100 page booklet contains thousands of listings of 200-400 kHz beacons identified, as well as a smattering of 1600-1900 kHz as well. Both domestic and foreign emitters are included. $7.50 postpaid from Longwave Club of America, Box 33188, Granada Hills, CA 91344.

TO PUBLISH OR NOT TO PUBLISH: That is the question many of our members are writing in concerning the "sensitive" frequencies. Tom (LA-003) asked our members how they felt, and many have replied. Rick (OH-019) has an extensive list of frequencies used in the Columbus and Cleveland areas which he would share should such publication take place.

David (MA-008) feels that the responsibility of distributing such a list should rest with the RCMA officers, and implementation should be on a subscription basis. Requirements might include two-year previous membership in RCMA and a background history of monitoring.

Clyde (CA-LA-090) shares Tom's initial suggestions, feeling that wholesale distribution of sensitive information whould only speed up the inevitable scrambling of channels we listen to. He feels also that such an overt publication within the magazine would be "proof" to authorities that we "scanner nuts" are a danger to national security. Clyde feels that an exclusive list would help solve the dilemma.

Tom (CT-031) feels, on the contrary, that a sole publication like the RCMA magazine would not constitute a basis for a radical change in government communications policies. He offers two viable alternatives to wholesale publication: 1) Put the decision to the membership as a whole through a call for vote; 2) provide a write-in column such as Contact where members could freely list their addresses and invite frequency swapping.

I would personally like to thank the members who have made their thoughts be known, and I am impressed with the calibre of their rationale.

* * * * * * * * * * * * *

From KEVIN (KS-019) Kansas City, MO
171.3875 Military Police
169.550 All-points bulletins on bad checks (anybody have any ideas ...ed.)
165.0625 Military Investigative Services
164.175 VA Security
163.5625 Sunflower Army Ammunition Plant
46.90 Army Reserves, Johnson County Airport
166.175 FAA training and Security

Thanks, Kevin for the nice list and for the kind comments about the column!

From Harry (NC-088) FLETC (Federal Law Enforcement Training Center), Glynco (Brunswick), GA
170.975 Police (Treasury Dept.)
170.425 Drive training (highway response)
170.100 Maintenance
169.550 Drive training (skid control)

(P.S. Before I hear any hysterical protestations regarding these Reasury Dept. assignments, they are all unclassified!)

Chuck IL-141 points out two mistakes I made in my reporting of his list: Marion Prison is a federal penitentiary, not a state prison; 163.5375 is US Army Corps of Engineers RANGERS, not just Corps of Engineers.

Consider me appropriately penitent.

Chuck goes on to say that he feels that a California firm who is advertising a Canadian version Regency M-400 is misleading the public, and it is merely a modified US version with a lot of problems. Anyone else have any information to share on this subject?

Incidentally, at this writing, Electra does not sell Canadian BC-220's outside of Canada. Any US dealer who advertises these must be getting them from Canada through their exclusive importer of from a Canadian dealer.

Joe (MD-015) also found an error in a previous list (this isn't my day!): October, 1980 column, Joe said there was no 166.625 FAA at the National Airport, not 166.925. There is no 166.625 at either airport listed.

411.925 National Park Service is the same as 166.925 (probably a link).

And Joe has some more:
164.800 US Capitol Police ch. 1
166.725 US Park Police command post
164.625 US Capitol Police ch. 2
415.200 GSA Federal Protection, Wash. DC (nationwide...ed.)

Thanks, Joe.

From James (NY-152) Ft. Drum US Army Base, Watertown, NY:
38.10 Range Division
38.50 Range Control, main channel
46.70 Range Control
38.85 Military Police

Thank you, James, for your first list. Hope we see many more!

From FRED (NM-005) US Forest Service, Cibola National Forest:
171.450 ch.1, normal traffic (repeater output)
172.350 ch.2, input to ch. 1 repeater
170.425 ch.3, simplex (fire, car-to-car, base/mobile)
172.225 ch. 4, base stations only (lookout-to-lookout, fireline, administrative)

Thanks, Fred, for information on this new system in your state.

From TOM (LA-003)
34.83 KKF643 D'Arbonne National Wildlife Refuge, Monroe, LA
KKF617 Catahoula National Wildlife Refuge, Jena, LA
KKF608 Lacassine National Wildlife Refuge, Lake Charles, LA
KKF601 Delta National Wildlife Refuge, Pilottown, LA
KKF603 Sabine National Wildlife Refuge, Sulfur, LA
163.275 National Weather Service Forecast Office, Slidell, LA. Emergency weather statement feed to WGSO AM radio station, New Orleans.

Update to US Dept. of Agriculture Federal Grain Inspection Service:

Destrahan, LA				
F1	415.350	xmt	415.350	rcv
F2	411.350		415.350	
F3	412.400		412.400	
Lutcher, LA				
F1	415.300	smt	415.300	rcv
F2	411.300		415.300	
F3	412.800		412.800	
New Orleans, LA				
F1	170.500	xmt	169.900	rcv
F2	169.900		169.900	
F3	169.975		169.975	

Maritime Administration:

166.150 transmit
169.075 receive
140.100 New Orleans Naval Air Station, fire department simplex
140.075 US Naval Intelligence, New Orleans (receive)
140.775 " " " " (transmit)
139.500 Armed Forces Police, New Orleans simplex ("Sandpoint")
401.7039 US Geological Survey data uplink to GOES satellite, Mayou LaFourche, LA (now there's an obscure one to satisfy everybody!...ed)

Very nice list, Tom. Thanks.
See a few more of you in here next month?

under 30 MHz

Chris Devendorf, Editor

Shortwave Utility

This column is for reporting RTTY, CW, MCW, SSB, AM and FAX reception reports, explanatory notes, articles, and questions related to frequencies below 30 MHz. Services covered in this column will be military, civilian aeronautical, coastal/maritime, SSB broadcast feeders, government, beacons, weather, voice markers, time/frequency stations, etc.--essentially everything except broadcast, CB, and amateur radio. Send to: Chris Devendorf, 29261 Buckhaven, Laguna Niguel, CA 92677. If you need a Shortwave Utility report form, please inclose a SASE with your request.

INFO

RADIO TELEPHONE SERVICES AVAILABLE FROM THE BRITISH COLUMBIA TELEPHONE COMPANY
HIGH FREQUENCY FIXED SERVICE (From Steve Tiearney CAN-47)

This service is used for telephone communications from remote sites such as mines, logging camps and so on. Calls are placed through VANCOUVER RADIO. (Vancouver Telephone Office). Remote stations transmit on the terminal receive frequency. This is the equivalent of the mobile input frequency on VHF mobile. The remote station's signal is repeated on the terminal transmit channel. At this time, the vast majority of transmissions are upper sideband, but double sideband signals have been heard on occasion.

CHANNEL	TERMINAL TRANSMIT	TERMINAL RECEIVE
VL-1	6825	6790
VL-2	5405	5810
VL-3	4865	5405

VL-4	3270	3171
VL-5	3359	3213.5
VL-6	4820	4610
VL-7	4543.5	4573.5
VL-8	7953	7804
VL-9	5248.5	5313.5
VL-10	2160	2030
VL-11	9315	9462
VL-12	--	--
VL-13	7658.5	7818.5

HIGH FREQUENCY MARINE: VANCOUVER (CFW3ØØ)

CHANNEL		SHORE	SHIP	PRIMARY USER
YELLOW	(VM-1)	2558	2142	TUG BOATS
WHITE	(VM-2)	2538	2015	FISHING BOATS
BLACK	(VM-3)	2260	2212	PLEASURE CRAFT
GREEN	(VM-4)	4410.1	4115.7	AIRCRAFT & LONG RANGE SHIPS
PURPLE	(VM-5)	2469	2708	BUSINESS OR PLEASURE

HIGH FREQUENCY MARINE: PRINCE RUPERT (CFW24)

BLUE	(RM-1)	2590	2166
ORANGE	(RM-2)	2060	2798

INTERCEPTS

Contributor		Receivers	RTTY unit
David Beck	AL-1	R-1000	
Mike Chabak	AZ-23	HQ-180	
Chris Devendorf	CA-OR-50	DR-33, SPR-4	Info Tech M-200E
Mike Jones	CA-LA-239	CRF-1	Kantronics Field Day 2
Fred Osterman	KY-18	R4B	Info Tech M-200E
Bob Rankin	KS-1	R-7	
Al Ricciuto	NY-150	DR-22	
Mark Saran	WA-4	SX-42, CZC-767	
Leonard Stock	CO-25	FRG-7000, ICF-2001	
Edgar Vest	VA-26	DX-300, DX-302	

Voice

254	AM	2-15	1052	"SPK" Reno Intl, NV - Aero wx	CD
263	AM	2-15	1041	"OGD" Ogden, Utah - Aero wx	CD
304	AM	2-13	0415	"BN" Davidson Metro, Nashville, TN - Aero wx	EV
326	AM	2-15	1045	"PQO" Phoenix-Sky Harbor, AZ - Aero wx	CD
350	AM	2-13	0410	"OKC" Oklahoma City - Aero wx	EV
362	AM	2-15	1047	"FZR" Oakland-East Bay, CA - Aero wx	CD
371	AM	2-13	0415	"ROA" Roanoke Muni, VA - Aero wx	EV
379	AM	2-13	0405	"TL" Tallahasse Muni, FL - Aero wx	EV
388	AM	2-13		"AM" Tampa-Peter O Knight, FL - Aero wx	EV
2150	USB	2-6	0232	USS PARSONS clg TIGER 782 (USN Tug)	LS
2670	USB	1-8	0214	COMSTA SAN FRANCISCO, CA w/Notice to Mariners bcst	MJ
2707	USB	1-29	0637	SPY STATION: YL GG 5-digit	DB
4627	USB	1-5	0242	GERONIMO 8 wkg THUNDER BIRD 35 (CAP-Arizona Wing)	MJ
4721	SSB	1-26	0407	RAF WEST DRAYTON - Aero wx	FO
4746	USB	1-5	0434	MAC DILL, FL wkg 76 with p/p to Little Rock	MJ
5500	USB	2-14	0320	Tac Military Comms in SS-mentioned "Terroristas"	BR
5588	AM	1-18	0626	SPY STATION: YL GG 5-digit	DB
5603	A3H	2-2	0555	SAN FRANCISCO, CA (ARINC) wkg WESTERN 564	AR

5610	A3H	2-4	0450	GANDER, Canada wkg MAC 6Ø2Ø2	AR
	A3H	1-27	0405	GANDER, Canada wkg AVIACO 7Ø3	AR
	A3H	2-4	0458	GANDER, Canada wkg PAN AM 2	AR
5675	A3H	2-5	0539	SANTA MARIA, Azores wkg ROYAL AIR MAROC 205	AR
5700	USB	1-29	0628	CAMPUS wkg AUTOGRAPH (USAF-SAC)	DB
6506.4	USB	1-27	0519	COMSTA PORTSMOUTH wkg MARTHA INGHAM(KCBO)	AR
	USB	2-12	2200	COMSTA PORTSMOUTH, VA w/ weather bcst	EV
	USB	2-15	0616	COMSTA SAN FRANCISCO, CA wkg NOAA SURVEYOR	MC
	USB	2-16	1955	COMSTA PORTSMOUTH, VA w/ weather bcst	EV
6540	A3H	2-3	0610	SAN JUAN, Puerto Rico wkg LT871	AR
6705	SSB	2-17	0430	OUTPOST wkg CANADIAN MILITARY 5714 w/ tfc	LS
6712	USB	2-27	0457	CASTOR wkg STATEMENT (USAF?)	MC
6720	USB	1-28	0322	R7W wkg 4CUAA (USN)	DB
6738	USB	1-29	0624	HICKAM, Hawaii wkg EAGLE 32	DB
7475	USB	2-11	1500	KDM5Ø FAA Hampton, VA wkg KBN72 FAA Savannah, GA	LS
7527	AM	1-29	0610	SPY STATION: YL SS 5-digit (ATT 58Ø 75)	DB
	USB	2-9	0000	SLINGSHOT wkg LASER and others	BR
	USB	2-9	0000	RAMPART wkg OMAHA 53	BR
	USB	2-9	0000	HOMEPLATE wkg OMAHA 45	BR
	USB	2-14	2313	RAMPART wkg SLINGSHOT	BR
	USB	2-24	0000	OMAHA 17 and 45 wkg SLINGSHOT	BR
	USB	2-26	0210	HIGHTIDE wkg 4 ALFA 3Ø7	BR
7532	USB	1-28	0210	SPY STATION: YL EE	DB
7700	USB	2-8	0452	KRF365 (DOE) wkg LOBO 343 w/ position report	LS
7706.5	LSB	2-19	1738	SWEAT 31 wkg ABNORMAL 1Ø (Vandenberg AFB)	MC
7715.5	LSB	2-12	0739	OFIPOSTEL Nouakchott, Mauritania, OM FF vm	CD
7820	LSB	2-4	0954	OSCAR clg KILO (w/ british accents)	CD
7836.6	USB	2-26	1407	SAIPAN MONITOR, Marianas wkg MARCUS LORAN (USCG)	MC
	USB	2-26	1408	IWO JIMA LORAN, Volcano Is. wkg SAIPAN MONITOR	MC
7885a	AM	1-7	0504	SPY STATION: YL SS 5-digit	MJ
7895	LSB	2-4	0717	KILGORE wkg TORREADOR (USN-Stockton, CA)	CD
8826	USB	2-4	0455	AEROFLT 437 clg BRAZZAVILLE Aero	LS
8882	A3H	1-29	0504	SAL IS, Cape Verde wkg SPRINGBOK 211	AR
	A3H	1-29	0511	DAKAR, Senegal wkg AEROFLT 415	AR
8945	A3H	1-31	0612	NEW YROK, NY (ARINC) wkg NIGERIA 850	AR
	A3H	1-31	0639	SAN JUAN, Puerto Rico (ARINC) wkg WEST INDIAN 900	AR
8968	SSB	2-17	0243	LOCKHEED FLIGHT wkg Ø165 w/ radio check	LS
8989	USB	2-15	0423	ARMY 66255 wkg MC CLELLAN, CA	MC
8997	USB	1-19	0605	SOUTH POLE wkg MC MURDO and SIPLE STATION	FO
	USB	1-19	0645	XDØ5 wkg MC MURDO, Antarctica	FO
9023	USB	2-19	1957	DRY RUN wkg AUDIO KIT and ARIZONA PETE (USAF)	MC
	USB	2-19	2045	DURKEE wkg CHURCHMAN p/p to REPERTOIRE (USAF)	MC
9057	USB	2-10	0205	IRVING wkg BUTCH GOLF w/ roll call (USAF-SAC)	LS
10049	USB	2-1	0706	DAKAR, Senegal wkg an aircraft	DB
	A3H	2-4	0517	DAKAR, Senegal wkg IBERIA 993	AR
	A3H	2-4	0526	RECIFE, Brazil wkg SWISSAIR 142	AR
10093	A3H	1-29	0425	HOUSTON, TX (ARINC) wkg BOAC London, UK (LDOCF)	AR
10523.6	USB	2-21	1306	MARCUS LORAN, Marcus Is wkg SAIPAN & YAKOTA MONITOR	MC
11076	USB	2-24	2317	ATLAS wkg FLINT 355 w/ radio check	BR
	USB	2-25	2150	SWORDFISH 2 wkg ATLAS w/ phone patch	BR
11176	USB	2-24	1339	ARMY 18118 wkg ALBROOK, Canal Zone	MC
	USB	2-25	1341	DIEGO TOWER, Diego Garcia wkg MAC 7Ø4Ø1	MC
11215	USB	2-19	2151	EDGY 25 (USAF E-3A) wkg RAYMOND 24 (Tinker AFB)	MC
11228	USB	2-19	2206	GULL 17 wkg MAC DILL p/p to GULL OPS	MC
11233	USB	2-24	0005	CANADIAN 5854 wkg TRENTON MILITARY, Canada	MS
11239	USB	2-22	2320	SAM Ø5Ø239 wkg MC CLELLAN, Calif.	MS
11244	USB	2-14	1545	MAC DILL, FL wkg an aircraft	EV
11255	USB	1-19	0009	ROTHERA BASE, Adelaide Is wkg SOUTH GEORGIA	FO
11555	USB	2-7	2206	KRF263 (DOE) wkg LOBO 341 w/ personal message	LS
12254	USB	1-19	0831	TZA512 Bamako Radiotelephone, Mali, YL EE/FF vm	MJ
12331.1	USB	1-28	1500	WZD4534 Pittsburgh, PA wkg UNIVERSAL TRADER	AR
13141.1	USB	2-12	2337	WTEA NOAA DISCOVERER wkg WTDM NOAA MILLER FREEMAN	CD
	USB	2-12	2358	KAB NOAA HONOLULU, HI wkg WTDM NOAA MILLER FREEMAN	CD
13201	USB	12-22	1808	LORING, Maine wkg NAVY 49667	AR
	USB	1-20	2054	SAM 27000 wkg ANDREWS, MD with p/p	MS

13215	USB	1-20	2355	SAM 12671 wkg ANDREWS, CROWN and STATE DEPT	MS
13218	USB	2-19	1741	AGAR 24 wkg ABNORMAL 1Ø (Vandenberg AFB)	MC
	USB	2-23	2015	Unknown station wkg ABNORMAL	MS
13247	USB	12-7	1515	ANDREWS, MD wkg SAM 682 p/p to STATE OPS	AR
13328	A3H	1-29	1800	NEW YORK, New York (ARINC) wkg SPEEDBIRD 265	AR
13756	USB	2-19	1748	AGAR 24 wkg ABNORMAL 1Ø p/p to Wright-Patterson AFB	MC
13950	LSB	2-27	0109	AIR FORCE RESCUE 856 wkg SIERRA 1	MC
	LSB	2-27	0120	AHF1C USMAG Loja, Ecuador wkg AHF4 Albrook AFB	MC
15015	USB	1-20	2015	SAM 27ØØØ wkg ANDREWS and CROWN	MS
	USB	2-8	1925	SAM 31682 wkg SCOTT w/ p/p to CROWN	BR
15031	USB	2-19	1948	BARTLEY (USAF E-3A) wkg MC CLELLAN p/p to WAR46	MC
	USB	2-23	0001	KING 32 wkg MC CLELLAN with p/p	MS
16080	SSB	1-23	0140	PANAMA wkg CAMPBELL w/ radio check	LS
16128	AM	12-27	1505	SPY STATION: YL SS	DB
16587	USB	12-21	1510	KUS773 Marcus Hook, PA wkg DELAWARE SUN	AR
17372	SSB	1-27	0134	HAPPY REAPER clg GROUNDHOG	LS
18005	SSB	2-20	0239	TAILSPIN (Canada?) wkg COGNIZANCE with relay	LS
18666	USB	2-14	1855	ATLAS wkg FLINT 458	BR
	USB	2-15	1900	ATLAS wkg FLINT 253	BR
	USB	2-19	1529	CONDOR 700 wkg ATLAS	MC
	USB	2-19	1539	FLINT 101 wkg 357	MC
	USB	2-19	1646	SUNDANCE 10 wkg ATLAS	MC
	USB	2-19	1651	FLINT 102 wkg ATLAS p/p from TIBURON	MC
22028	USB	1-1	1810	QUEEN ELIZABET II w/ phone patch	DB

Morse

201	MCW	12-12	0430	"RI" Beacon - Riviere du Lup, Quebec	AR
207	MCW	12-15	0540	"CL" Beacon - Charlo Fair, New Brunswick	AR
209	MCW	12-12	0625	"MT" Beacon - Chibougamu, Quebec	AR
213	MCW	12-15	0602	"RC" Beacon - St Honore, Quebec	AR
224	MCW	1-24	0434	"DN" Beacon - Dauphin, Manitoba	LS
266	MCW	12-16	0640	"DU" Beacon - Du Bois, PA	AR
272	MCW	12-16	0655	"UCP" Beacon- Castle, PA	AR
275	MCW	12-12	0735	"CJY" Beacon- Utica, NY	AR
200	MCW	12-22	0517	"B" Beacon - Red Islet, Quebec	AR
335	MCW	12-12	0530	"RWN" Beacon- Winamac, IN	AR
373	MCW	12-15	0420	"PMH" Beacon- Portsmouth, OH	AR
400	MCW	1-28	0325	"AHQ" Beacon- Wahoo, NE	LS
	MCW	2-4	0209	"CBK" Beacon- Colby, KS (under "FN")	LS
403	MCW	12-15	0430	"AXA" Beacon- Algona, IA	AR
1621	CW	12-10	0524	"3BT" Beacon	DB
1624	CW	12-10	0528	"ZT" Beacon	DB
1631	CW	1-29	0650	"FM315" Beacon	DB
1635	CW	1-29	0649	"AK11" Beacon	DB
1636	CW	1-29	0658	"X313" Beacon	DB
1638	CW	12-10	0533	"J336" Beacon	DB
1650	CW	1-29	0634	"DF84" Beacon	DB
4332	CW	1-24	1515	JCK Kobe Radio, Japan, CQ mkr	MJ
4615.2	CW	2-9	0230	IDR2 Rome Naval Radio, Italy, v mkr	BR
8703	CW	1-15	0742	CLA22 Havana Radio, Cuba, CQ mkr	MJ
8992	CW	1-20	0555	6WW French Navy Dakar, Senegal, V mkr	MJ
9060	CW	1-4	2338	AQP Karachi Naval Radio, Pakistan, V mkr & tfc	FO
11130	CW	1-9	0852	ZLZ22 Himatangi Metro, New Zealand, wx bcst	MJ
11231	CW	10-28	0501	"F" Beacon	DB
12692	CW	1-20	0524	ZRQ5 Capetown Naval Radio, S Africa, V mkr	MJ
12829.5	CW	1-19	2109	XFM Manzanilla Radio, Mexico, CQ mkr	MJ
12898.5	CW	1-19	2116	DAN Nordeich Radio, W Germany, CQ mkr	MJ
13099.6	CW	1-19	2135	TIM Limon Radio, Costa Rica, V mkr	MJ
13425	CW	12-23	2100	RIW Khiva Naval Radio, USSR, QSX mkr	AR

RTTY

4334	100/170	1-16	0625	NOJ USCG Kodiak, AK, wx bcst	MJ
4575	100/170	2-17	1020	NMO USCG Honolulu, HI wkg NODX	CD
5100	66/850	2-3	0859	AXM32/34/35/37 Canberra Metro, Australia, RY	CD
5185	66/850	2-3	0856	PPN9 Brasilia Metro, Brasil, Wx tfc	CD
6330	100/850	1-18	0855	CFH Halifax Military, Nova Scotia, wx bcst	MJ
6714	66/	1-20	1425	BXTS, RY test (China?)	MJ
6815	66/	1-20	1430	BAL34, PR of China, RY test	MJ
7327.5	66/850	2-7	1029	JiJi Tokyo, Japan, SS news	CD
7406		1-15	0225	CML5 Havana, Cuba, ry test to ITT New York	MJ
7542.5		2-6	1011	ZEN33 Hong Kong, RY test	CD
7695	66/425	1-14	1430	3MA22 CNA Taipei, Taiwan, RY test	MJ
	66/850	2-14	0956	3MA26 CNA Taipei, Taiwan, RY-QRA	CD
7863	66/425R	2-7	1001	BJZ21 P.R.C, wx tfc	CD
8457	100/170	2-12	0805	NRXD USCGC Evergreen wkg NMA Miami	CD
8510	100/170	2-17	0830	NMO USCG Honolulu, HI wkg NAAO CGC Glacier	CD
8701	100/	1-15	0748	CTU3 Monsanto Naval Radio, Portugal, RY test	MJ
9217	/	1-21	0241	Unk station w/ QJH1 tape/RY test	MJ
11130	66/850	1-7	0635	NZCM McMurdo, Antarctica clg ZLZ22, wx tfc	MJ
11280.5	66/	1-9	0848	Prensa Latina, Havana, Cuba	MJ
10492	66/425R	1-29	0857	"RFTJF" French Military, RY test	CD
10720	66/850	1-22	0648	LRO Buenos Aires Metro, Argentina, coded wx	MJ
12509	66/170	1-8	0832	UFB Odessa, USSR, telegrams	MJ
13366	66/425	1-19	2143	5YD Nairobi Metro, Kenya, RY test	MJ
13737	66/425	1-19	2152	5YD7 Nairobi Metro, Kenya, Coded tfc	MJ
13890	66/850	1-4	2137	YVV2 PL Caracas, Venezuela, RY test	MJ
14525a	100/425R	1-11	2346	USIA/VOA Poro, Philippines, RY test	FO
14825	66/425	2-1	1901	Y2V25 ADN Berlin, E Germany, RY test	FO
14989	66/425	1-25	2310	TNL Brazzaville Air, Congo, RY test	MJ
15743.7	66/425R	1-14	1529	VNA Hanoi, Vietnam, EE news	FO
15830	66/425	1-8	0259	RUZU Molodezhnaya Base, Antarctica, RY test	MJ
16372.5	66/425	1-25	1600	WFD86 UPI New York, NY, press and RY	MJ
18105	66/425	1-16	2015	XDD260 Infomex, Mexico, news	MJ
18988	66/425	1-8	0251	JAX78 Tokyo Air, Japan, RY test	MJ

Attention Contributors: Some loggings were not used due to incomplete information or duplications.

ZWPFL TREIV RUKYZ JUIFG

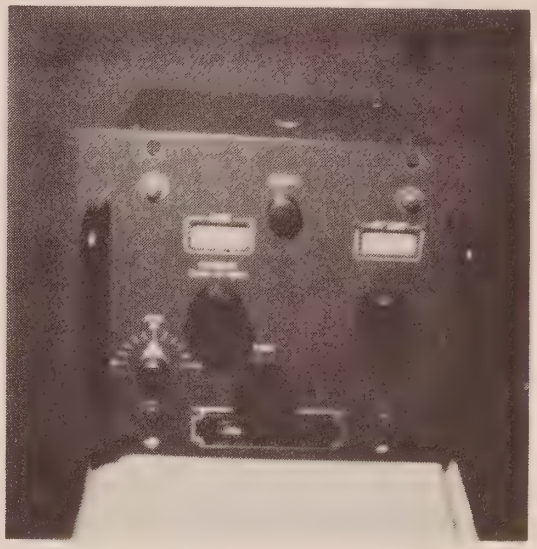
DVRCZ EVREU CVKDV BEFNO

Miscellany

P.O. Box 216
Willow Grove, PA 19090

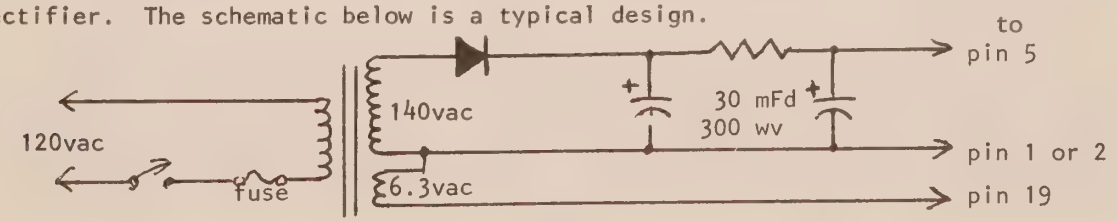
Have you been wanting to get started listening in on the 225 to 400 mHz military aircraft band but didn't want to drag home a 60-pound hunk of iron? Most of the surplus military equipment available is old, heavy, and hard to keep running, requiring at least some electronic expertise. Well, I found a neat little surplus converter that measures less than 7" x 7" x 11", has 5 tubes, and is the model of simplicity. All it needs is a simple power supply, a receiver, and an antenna. It has 2-knob tuning of the entire band, 225 to 400 mHz, with the output at 30 mHz.

The unit is the AM-914/TRC. It's the plug-in RF front-end for the R-417 radio relay receiver. The R-417 is used in various configurations, TRC-24, TRC-32, etc. By switching RF units, the R-417 can be used on a number of bands. 225-400 is the most commonly used band and the receiver is still used by National Guard units around the country, usually as the TRC-32, a radio relay van. It's obvious that there should be plenty of these converters floating around. Check your local electronic surplus stores. One may turn up. Fair Radio Sales (Box 1105, Lima, OH 45802) has them for $34.95. I bought one from them and it was sealed in the box from the depot. On these pages are a couple of pictures of the unit so you know what you are looking for. (I don't know how well the photographs will come out, though.)



In essence, the converter is ready to go the way it is, with the addition of a power supply. You'll need to make up a cable to connect it to the receiver you use. The jacks on the back will mate with BNC-type connectors, but can be changed if you desire. If you use the existing jacks, for the output (P4), use a female-type BNC connector with a cable out, the type that mounts on a chassis, such as the UG-291, UG-89, or UG-909. With a PL-259 on the other end of the cable and an SO-239/pin-plug adapter, you can connect to most SW or VHF radios.

The power supply is a piece of cake. 150 volts DC is all you need for B+ and 6.3 VAC for filament. While you are prowling the surplus stores, pick up a suitable transformer, one with a 6.3 V filament winding and a plate voltage winding around 130, 140 volts. Pick up a rectifier diode and electrolytic capacitors with a sufficient voltage rating for the filter. Make sure you get the highest capacity filters you can and maybe even throw in a filter choke, if you can pick one up for a couple bucks. If the only transformer you can find has a high secondary voltage, say 150-160 volts, just use one diode in a half-wave circuit and a suitable dropping resistor. This will require additional filtering but will keep the DC voltage closer to 150 volts. With a lower voltage transformer, you can use a diode bridge rectifier. The schematic below is a typical design.



Throw it together on a little chassis and you're in business. On the connector on the back of the converter, hook B+ to pin 5, filament to pin 19, and ground to pin 1 or 2. Just solder to the pins on the plug. Since you won't need the four twist-type fasteners on the front panel, twist off the washer on the inside of the panel with a pair of wire cutters and remove the fastener. For an antenna, a discone would be the best way to go, due to the wide band of frequencies involved.

Operation is simple. The two knobs, COARSE and FINE, tune the oscillator, the RF AMP control tunes the RF amplifier stage! Since aircraft communications are AM, you will more than likely want to use an AM receiver. A shortwave receiver is ideal, although it won't have a squelch control. I use a Realistic PRO-2 tunable VHF monitor receiver, which has switchable AM or FM. Another good alternative would be a multiband, tunable portable radio that has low band. Most tunables will receive AM almost as well as FM. Add an antenna jack if yours doesn't have one. The last choice would be a scanner, at least for general tuning around. The limiter stage in an FM scanner will cause AM audio to be extremely weak and the sharper selectivity will make tuning harder.

The first thing you will notice is that the dial isn't marked in mHz. It's calibrated in Channel Numbers. For 'even' wideband channels, you add 199 to arrive at the actual frequency. (For 'odd' channels, you add 199.5. Wideband channels are 500 kHz apart.) This shouldn't present much of a problem. Instead of tuning the output of the converter at 30 mHz, tune to 31 mHz. This makes the dial exactly 200 off. 305.4 mHz will read as 105.4. You could also just move the index pointer off slightly. To use, tune the COARSE control to the range you want and release it, then fine tune with the FINE control. As you tune across the band, you must remember to track with the RF AMP control. Peak it for maximum signal strength when you tune in a station. The AFC control shifts the receive (oscillator) frequency. The increments are approximately 500 kHz steps, but the control is not linear. At +5, the receive frequency is shifted down 2 mHz, at -5, upwards 2 mHz. Its range is greater than the mechanical FINE tuning knob so it does not make a good fine tuning control. Just leave it centered, being careful not to bump it as you tune the other knobs. After you use the converter for awhile, you will become adept at tuning, closing your squelch and peaking the two controls, or using the S meter, if the radio you use has one. Practice on a steady signal such as your local ATIS, an ILS carrier (between 328.6 and 335.4) or a local-oscillator harmonic from a programmable scanner sitting nearby. The OSC controls have a very slight backlash which takes getting used to. The oscillator itself is very stable, though, with almost no drift. You can use it as a fixed frequency converter, too, if the desired frequencies aren't too far apart. If, for example, you want to tune from 285 to 289 mHz, set the OSC and RF AMP dials at 287, then use your receiver to tune either side. With a Yaesu FRG-7 shortwave receiver, I can obtain adequate output over at least an 8 mHz band. The only disadvantage is that the sensitivity will fall off gradually, even if you do retune the RF AMP control.

A number of modifications can be made, limited by your ingenuity, I suppose. If you are very artistic you can make new dials calibrated in mHz. Or, you can just re-label the first digit on the existing dials, changing 120 to 320, for example, and tune the output 1 mHz higher for the correct readout as I mentioned before. To remove the front panel will require a good set of hex wrenches. Remove all the knobs except the INDEX knob. Pop off the clip, carefully removing the spring from

the COARSE control. Remove the four screws and the front panel will come off. While you have it off, you can remove the two front handles although you may think they look better on. When you re-install the COARSE control knob, you can put in a weaker spring if you want, but make sure the new one has sufficient strength to return the bevel gears to their proper position as the knob is released. When you first remove the AFC knob, do so at the coupling behind the front plate, then just leave the knob and shaft off, if you won't be using it. Inside the converter, you'll note the AFC capacitor is also driven from the rear by a little servo motor. This motor takes 120 VAC on one winding and an AFC correction voltage on the other. Rather than risk death, I would leave it alone and, like I said, just center the control on the front, then remove the knob and shaft and forget about it.

While you're looking inside you'll see the tubes, V1, a 6J4, being the first RF amp and V2, the second RF amp. V3 is the mixer. V4, a 5670, is mounted at an angle behind the tuning cap and is the oscillator tube. V5, another 6J4, is the oscillator buffer-amp. 6J4 tubes are still available commercially although they are relatively expensive, about $9 wholesale. They are in abundant supply on the surplus market, though; you may want to keep half a dozen for spares. Type 8532 is the same tube and will most likely be the type you will find. The 5670 is a premium-type twin triode that has a different pin basing than more common types such as the 12AT7, plus having a single 6.3 V filament pin. They run about $5 wholesale but are also readily available surplus and you should buy two or three extra of them, too. Fair Radio sells them for $1 each, used. 6J4/8532's run a buck each, used, also. You should be able to test the 6J4 on a commercial-type tube checker (not the old drugstore variety). If you can't find a tube checker that will test the 5670, it should test with pretty much the same bias settings as a 12AT7 but the pin basing is different. Triode #1 is the same but triode #2 has the plate on pin 4, the grid on pin 3, and the cathode on pin 2. The filament is 6.3 volts on pins 1 and 9. Many tube checkers, such as the B&K 747, will check both types and have the setup for them on their charts.

If you get a converter just removed from service or if you buy a reconditioned unit from Fair Radio, it shouldn't require alignment, but, if yours ever does, the adjustments are accessible from the bottom. In order, from back to front, they are: 1st RF amp plate trimmer coil (L4), 1st RF amp plate trimmer cap (C2), 2nd RF amp plate trimmer coil and cap (L8 and C6), mixer grid trimmers (C9 and L9), and buffer amp plate trimmers (C32 and L18). Align the trimmer caps at the high end of the band, the coils at the low end. The master oscillator adjust is located behind the access cap on the left side of the unit (be sure the front panel INDEX knob and the AFC are centered before adjusting the oscillator). Z1 is the output matching circuit. If you want a schematic, send me ~~$5.95~~ (just kidding)...Send me a long SASE with an extra mint stamp inside.

The AM-914 has good sensitivity and, like I said before, is ready to hook up to a power supply and a radio and run. It is simple and requires a very minimum amount of maintenance or electronic expertise. Not only that, it has a nice compact appearance and will fit neatly on your scanner table, without taking up the whole table!

George DuBois

MONITORING & THE LAW

Editor Needed!

We need a new Monitoring and the Law column editor. This person should have some familiarity with monitoring laws and it would be desireable if he/she had a collection of them from around the nation. This editor would be required to generate some information for the column as well as organize input from the general membership. If you are interested, please TYPE a letter telling about yourself and qualifications to: RCMA Managing Editor, P.O. Box 216, Willow Grove, PA 19090.

Aircraft

Major Ron Hammer, Editor

Send private, commercial, firefighting, and law enforcement aircraft frequencies of interest in the 108–136 MHz range and frequencies in other bands above 30 MHz associated with airports and aircraft, plus questions, articles, and tips related to aircraft monitoring to: Major Ron Hammer, 821 Elisa Way, Roseville, CA 95678.

Our gruelling winter is finally coming to a close here in the Golden State of California. Sacramento, here in Northern California, is sort of at the North-Westerly end of the "Sun Belt", I guess. I was sitting out on my patio in late February--sucking up some sun-rays--musing about what the rest of the country was doing for fun--like chipping ice and shoveling snow. The "long winter" for me was not due to the weather, but other events. I'm afraid I'm going to have to give up the column, at least as a full-timer. I've mentioned being layed-off from my job last October and having to find another, now much more,demanding one. The family illnesses in December were followed by the death of my father just after his 85th birthday last month. Things beyond my control have just piled up. If I'm going to live to be 85, I'm going to have to back-off a few things. By the time you read this, I will have informed Chuck Gysi of the necessity of my decision.

With that out of the way, lets press on to some of the mail: Terry Mefford (OH-036) writes that his local Springfield (Clark County) Airport there in Ohio uses 120.7 (Twr), 121.7 (Grnd Ctl) and, of course, 121.5 (Emerg.).

Ronald A. Pokatiloff (IL-083) of Waukegan, Il recommends the "Flying Book Club" (P. O. Box 2001, Lakewood, NJ 08701) for books such as "MAYDAY", "Airport Confidential" and "Conquest of the Skies". It appears to be a membership type book club.

While we are on the subject of airplane and aviation books, I can personally recommend AIRLINE PUBLICATIONS, U.S.A., Harrisburg International Airport, 41B Luke Drive, Middletown, PA 17057. Being an old C-130 "Hercules" pilot, I immediately glommed on to "HERK Hero of the Skies" by Joseph Earl Dabney ($15.65 post paid), "C-130 Hercules Pictorial" ($5.00 pp), etc. The have much more--books, aircraft photos, production lists--a veritable orgy of airplane stuff! In their Stratocruiser & C-97 Pictorial & Production booklet I found a number of specific airplanes that I had flown. Some were taken while I was in the orgnization flying them; some were taken years later when the airplane was doing some other function. Airline Publications, U.S.A. is a subsidiary of the group by the same name in England (hence availability of some of the super English books) and they have offices in Australia and Canada as well. Write for their free catalog.

Another purveyor of very high quality airplane books is Crescent Books Division, Crown Publishers, Inc., One Park Avenue, New York, NY 10016. They market the British Salamander Books such as "The Illustrated Encyclopedia of the World's MODERN MILITARY AIRCRAFT". Slick, colorful and well done--with silhouettes, cutaways and text. Crown Publishers also has one that retails for $18.95 titled "The Vietnam War" done in great pictorial and textual detail. I treasure my copy beings that was the only war I personally ever attended. I'm sure, by now, every aviation buff has his copy of the catalog of authentic aviation stuff from leather jackets to anglehead flashlights put out by "The Cockpit", Division of Avirex, Ltd., 468 Park Avenue, South, New York, NY 10016. I know I haven't yet said anything about radio, but if you like to listen to airplanes, these catalogs and books should really turn you on, too.

Larry A. Smith (MI-001) writes again and sent along some interesting little cards he passes out to people plugging the scanning hobby in general and the R.C.MA. specifically. I'll take the liberty of cutting one apart and reproducing it here. Larry probably has every frequency in Michigan by now, so if anyone has any needs in that area, contact him at the addresses/phones shown below:

DO YOU OWN A SCANNER OR THINKING OF PURCHASING ONE SOON? NEED HELP OBTAINING HARD TO FIND FREQUENCIES? WANT TO MEET OTHERS WHO SHARE IN YOUR LISTENING INTERESTS? IF YOU ANSWERED "YES" SO FAR, READ ON:

RADIO MONITORING HAS BEEN MY HOBBY SINCE 1955 AND I'VE MET MANY INTERESTING PEOPLE HELPING THEM WITH HARD TO FIND FREQUENCIES TO EXPAND THEIR LISTENING PLEASURES. I AM ALSO A MEMBER OF THE R.C.M.A., THE LARGEST "INTERNATIONAL" SCANNER CLUB IN THE WORLD. THE DECEMBER 1980 MEMBERSHIP IS OVER THE 2,300 MARK AND GROWING MONTHLY. WE HAVE 65 MEMBERS SO FAR FOR MICHIGAN ALONE.

THE SERVICES ARE TOO NUMEROUS TO MENTION HERE, BUT I'LL GLADLY GO OVER THEM WITH YOU WHEN YOU CALL OR WRITE ME:

HOME:
LARRY A. SMITH
1223 VINSETTA BLVD.
ROYAL OAK, MI 48067

PHONE: 313 – 398-9797

COTTAGE:
LARRY A. SMITH
8984 CRESCENT BEACH RD.
SAND POINT
PIGEON, MI 48755

PHONE: 517 – 856-2830

Larry puts out a colorful letter, postcards, stamps, etc. If you live in that area and the weather is so bad that no one is flying, you can listen to the snowplows on 156.165 and 156.18!

Another Larry, this one Larry E. Herrick (NY-086) of Gloversville, NY 12078 sends a nice list of New York frequencies for Albany, Schenectady, Poughkeepsie, Glen Falls and Saratoga County. Unfortunately, as they are not typed, yet are widely published frequencies, I will have to save them for another day, perhaps. Larry does note that Page Airways and Richmar Aviation both operate out of Albany on 123.0, which may not be widely known.

Alan Leder (NJ-084) wrote and sent a buck for the 1958 USAF Radio Facility Chart page reproduction for the area around his home ground there in Paterson, NJ. Remember, if anyone wants the page of their local area(s) 23 years ago, just pop a greenback dollar into an envelope and tell me the area you want.

Richard Prelinger--one of about seven known people who moved from San Francisco to New York City (not counting Johnny Carson types) sends another ready-for-the press, professional looking list of airline freqs for San Francisco and Oakland areas. Even as I sit here typing this, his freqs are in my Bearcat 220, doing their thing. A real nice list, Richard. Keep them coming!

Speaking of my Bearcat 220 doing its thing, my little bride of these many years has never been too "into" any of my numerous hobbies other than to learn when to say, "That's nice, dear" or "Really?" or "Uh huh". Well, our otherwise nice little neighborhood was unfortunate to suffer a little domestic "occurance" recently--right across the street. There were two firetrucks, an emergency rescue squad truck, two police cars, the Fire Chief and one ambulance and about 40 associated people milling about in front of our house. To stand at our front window and monitor the whole happening and know we were the only two people in the area to have the whole picture sort of impressed her. While she didn't rush right out and join R.C.M.A., she was squealing, "Quick, get the ambulance frequency--it's the A-1 ambulance!" We were even getting radio relays of telephone conversations to/from the scene. The only guy in the neighborhood not involved was the off-duty policeman who lives next door to the disturbance. He was trying to wash his truck and pretent nothing was going on. I know this is not an aircraft monitoring tale, but was the best all-coverage scanner action I've ever experienced short of half the 7th Air Force trying to extract a downed Navy A-4 pilot out of Laos back when I was in the war. Take my word for it--events of this nature are more enjoyable from your living room than from the cockpit of an "involved" aircraft dodging tracers!

George DuBois (OR-001) from Portland in my home state of Oregon wrote a nice letter. George, when I first inquired about writing this column I spoke my opinion that the UHF aircraft band (225-400 MHz) should be with other airplane talk in the Aircraft Column. While everyone seemed to think the idea had merit, apparently no one thought enough of it to actually make the change. Bob Grove didn't seem too keen on giving it up,as a large portion (but certainly by no means, all) of the traffic is military-operational in nature. With my background I've probably said more words on UHF-tactical than all the other radio freqs put together. There is a whole plethora of neat stuff to listen to on those freqs.

Of course you've got to be in the right UHF-range areas, but you can hear air-rendevous and refueling operations, aerial delivery of troops and equipment, air-to-air and air-to-ground gunnery, search and rescue, command and control, bomb dropping/scoring--virtually any and everything the military does with flying-machines. I might add here that I don't believe the monitoring of this stuff is going to jeprodize the national security. As I've noted in this column before, if the military is going to be saying something really secret, it will be encrypted in a manner that your handy little $19 de-coder isn't going to unravel.

I do not, at this instant, have UHF capability yet (although the USAF's SR-71 outfit is based only 27 miles NNW of my house). The SR's can be pretty sneaky at altitude and speed, but its a little hard to hide where they take off from. With burner flames about a block long and a sound that you can feel as well as hear, that part of their operation ain't too sneaky. I don't think their radios are ARC-3 VHF's, either--at least I've never seen any of their pilots carrying a box of crystals around. (Ho Ho) ANYWAY, the UHF scene is a hell of a lot more interesting than some business-paging freq going, "BEEEP--Oswald, call your office." So far, the scanner companies seem to think that that is what we all want to listen to. I quote an excerpt from an August 12, 1980 letter from Electra-Bearcat's sales department: "OUR MARKET RESEARCH DIDN'T JUSTIFY ENOUGH INTEREST TO PUT THE 225-390 MHZ BAND IN A SCANNER." I'll just bet that not too many people do listen to that band--what with the only equipment heretofore (that's a lawyer word) available being some "handy" little quarter-ton rig out of a B-36!

George, write up anything and everything you can on the band. I'm sure Bob Grove will publish it or someone will. If no one else will, then I will. The hobbyists have just moved a little too fast for the monolithic companies that produce the equipment--which is true in all fields of interest. I've spent a good part of my life writing to companies, publishers, editors, manufacturers, etc. pleading for this or that in one hobby or another--and then grit my teeth in mixed emotions when they finally come out with it--and announce it as though they had dreamed it all up themselves for us little hobbyist-dullards. They could go on and sell a million of the whatzits, but never give you a 10¢ post-card of thanks. It's not credit we're after, though, it's UHF band equipment. Keep it on them. As noted in one of my little economic lectures in previous columns--if the big guys won't produce, then the Japanese (or Koreans or Taiwanese) will--or some guy operating out of his chicken-house down in Escondito will. (My apologies to my hero President Reagan--and he really is--but his "supply side" economics don't seem to work with some companies--we have to DEMAND things before we get them.)

George also mentions a forthcoming article for "Tech Topics" concerning a $50 surplus, do-it-yourself UHF converter for any ol' AM radio! That sounds interesting! George's address is 10048 N. E. Campaign, Portland, OR 97220 if you have any UHF inputs or encouragements for him. George, if you can't decide on a column editor, send it to Chuck Gysi and let him decide. Thanks for an interesting letter. (George is our "FCC Topics" Editor.)

Lybrand P. Smith (CALA-157) of Torrance, CA writes some good poop on the LAX traffic patterns, etc. I'll save if for later due to space, but he notes that he monitors the Los Angeles (or whatever it's called) Automatic Terminal Information Service (ATIS) recorded broadcasts and LAX tower's visibility reports during the frequent periods of fog there while he is driving the freeways. The ATIS is on 133.8 in that area. ATIS is not the same as the National Weather Service broadcasts listed in the last column. Thanks for the tip.

Les Cammer (CASR-010) of Santa Barbara, CA dropped a card noting that he gets San Francisco on 131.95 and Oakland on 134.39 way down there on his BC-300 using an RS ground-plane in his attic. He wants to know if there are any more powerful transmitters up here in Northern California! Well, Voice of America use to have a transmitter over near Dixon, CA that I've walked around inside of (yes, it was a big-'un), but I don't see them listed anymore in the '81 World Radio/TV Handbook. (Ha) I can't get any ground stations from either S.F. or Oakland and I live less than 100 miles from the Bay Bridge. Don't be greedy, Les.

Joe M. Lewis of Hyattsville, MD (MD-015) writes that the National Airport police, fire and parking lot people operate on 165.500 and 165.662 while the Dulles Airport freqs for the same units are also 165.500 and 165.712. Maryland State operated BWI Airport fire is on 453.800, cops on 453.900 and utility on 154.95. Helicopters in the D. C. area can be found on 123.050. He adds that the Tampa, FL airport police are on 453.400. The rest of the freqs he lists are, I believe, widely published.

Eddie Muro (NY-041) sends a note that he lives in Nassau County, Long Island about 5 miles east of Kennedy Airport and 25 miles east of Manhattan. He says he is surrounded by lots of air traffic. I guess I can believe that! He is (was) going to try to monitor the West Point scene for the hostages arrival there. He gets the Air Force on 46.75 MHz. Hope to hear his West Point report.

Our Pres. (R.C.M.A. Pres.--not Mr. Reagan) sent me a computer alpha (alphabetized) listing of all you guys. Yes, it will help--some of your handwriting is as bad as mine. I even write checks with a typewriter! This outfit sure is growing. It's scary to think how many people out there might be reading my prattlings! Not all of them are hobbyists, either! I've had phone calls from electronic surveillance specialists asking questions on various equipment, etc. Let me say right here--I am an "appliance operator"--I don't design or build electronic stuff beyond some simple kits. About all I know about electrons is that they are pretty small and if you drop some on the floor they are hard to find. Sorry.

Bryan Hunnell (CAOR-097) to whom I send all this stuff for publication sent me a whole envelope full of stuff that once was my predecessor, Mark Holmes' data. Apparently it originated with Karl Pagel (CAOR-022). A lot of it is UHF fregs which I guess I'll have to send on to Bob Grove, alas. I'll include one page of Mark Holmes' (IL-008) Airline Company Freqs. Bryan also sent a little booklet entitled "FLIGHT--The Story of Electronic Navigation" (1972) put out by the FAA Academy in Oklahoma City, OK (Will Rogers Field, I believe). It is a basic little book covering every thing from low-freq ranges to modern VORTAC's. Some scanners will get the nav-aid freqs around 108-117.9 MHz, but except for some weather reports they rarely have anything to listen to but repeated Morse I.D.'s. TACANs (the TAC portion of VORTACs operate in the UHF band as do ILS glideslopes). If you really want something exciting, go out and monitor a middle-marker on 75 MHz--except they only transmit straight up! See Mar'81 issue pp. 75-77 (DuBois)

Do do this: Get yourself a Heath Frequency Spectrum Wall Chart (Cat. #HDP-1495) "This colorful addition to the wall of your Amateur station measures a big 31" W x 22 1/4" H. It's a full color, graphic breakdown of the radio frequency spectrum. Comes to you rolled in a mailing tube. (Wt. 1Lb)" It really is a neat chart that lists everything: Diathermy machines, radio astronomy freqs, Omega navigation, Decca navigation, Loran C & A, remote control models, space up/down links, biomedical telemetry, UHF TV translators, studio-transmitter links, microwave ovens (sort of dull), "death ray" water-resonance freq., and a whole bunch more including all of the aircraft allocations of all sorts from 10 KHz (VLF) up through 300 GigaHertz (ELF) band. It's really neat for only $4.95 plus postage. Heath Company, Benton Harbor, MI 49022 (and you don't even have to build it!)

From Frequency Spectrum Charts to books again: Scott P. Menke (IL-054) of Elgin, IL recommends "Cleared to Land" The FAA story by Frank Burnham from Aero Publishers, Inc. 329 West Aviation Road, Fallbrook, CA 92028. Scott sez that it is also to be found at most libraries. It has a lot of basic stuff for the new listener. He also recommends "The Flying White House" The story of Air Force One by J. F. TerHorst and Col. Ralph Albertazzie published as a paperback by Bantam Books. Scott notes that most states have some sort of Department of Aeronautics or some such name. They will usually send you tons of stuff for free if you write to them. He got all kinds of free poop from the State of Illinois.

Milton Phegley (CASD-025) sent along an article about the Air Force transferring some of their GCI (Ground Controlled Intercept) long range radar sites to the FAA. I don't know about our defense surveillance radars being manned by the FAA. What happens if they go out on strike?

Well, by now you have probably dozed off to sleep. I know that I am certainly tired of typing. If you send for all of these catalogs, book lists, charts, etc. that ought to hold you until next time. I seriously believe that I have now answered in this column each and every letter I've received. I hope I haven't missed yours, although I do owe some folks replies. (No, I don't steal the stamps off your S.A.S.E.s)

DOES ANYONE OUT THERE KNOW ANYTHING ABOUT MONITORING RADIO TRANSMISSIONS WITH AN OSCILLOSCOPE OR SPECTRUM ANALYZER?? ANY BOOKS AVAILABLE ON THIS SUBJECT?? Remember, I'm no more of an electronics engineer than I am an author.

Ha! You only thought I was done. I just received Bob Grove's neat little Spring/Summer '81 catalog. I plug Bob's stuff a lot. He's not my brother-in-law. In fact I've never met him, although I feel I'd like him if I did. He comes across to me as being knowledgable, sincere and honest. His new little catalog has all sorts of keen stuff such as Code Breakers, multi-use A.C. adapters, a new, small voltage-probe active UHF/VHF antenna, Hamtronics out-of-band converters (sort of expensive--but they are available), scanner filters, pre-amps, SW/LW tuners, frequency books/lists, etc. A whole lot of thoughtful new goodies added to his previous line. He also has some "Bits from Bob"--little tips that you might not know concerning radio receiving. Do yourself a favor and drop him a line for his catalog AND--LET HIM KNOW WHAT YOU'D LIKE TO SEE MADE AVAILABLE in the future. He tries to expand his line all the time. (Grove Enterprises, Inc., Brasstown, NC 28902) Bob is one of us--not some distant, unlistening corporate giant (so far).

I received a very nice letter from Arnold L. Salmon (SD-001) inquiring about some terminology he hears on airline freqs--airplane/flying terms not necessarily strict FAA Air Traffic Control terminology. These are my kind of questions as the answers are more likely to come from flying experience rather than out of a book. So, next issue it is my intent to delve into some answers to Arnold's inquiries. He claims he's new to monitor-listening, but not a total greenbean. He was an Army Air Corp Aviation Cadet back in WW II. Welcome to R.C.M.A., Arnie.

In closing (for real, this time) I'll attach some pages from my aforementioned (another lawyer word) 1958 Radio Facility Chart book so you can see what it is that I am talking about.

AIRLINES (SAN FRANCISCO, OAKLAND AREAS)

151.865	KMK936	Pan Am (San Francisco)
151.865	KGF475	Butler Aviation (SFO)
460.650	KSK596	Pan Am (SFO)
460.650	WXS745	Air California (SFO)
460.675	KLT378	TWA (SFO)
460.725	KGU934	United (SFO)
460.750	KTX255	Western (SFO)
460.775	KLH769	ARINC (SFO)
460.775	KXY211	American (SFO)
460.800	KET750	National (SFO)
460.800	WYL491	ARINC (SFO)
460.825	KQZ656	Delta (SFO)
460.850	KMJ690	TWA (SFO)
460.875	KFJ292	United (SFO)
460.875	KYK739	Flying Tiger (SFO)
462.650	KAB2771	China Airlines (SFO)
462.775	WYS363	United (SFO)
463.575	WYF354	Flying Tiger (SFO)
464.325	KDD676	United (SFO)

464.575	KVP417	Pacific Southwest (SFO)
151.775	KLH856	TWA (Oakland)
460.650	WXS744	Air California (Oakland)
460.725	KLC479	United (Oakland)
460.750	KBD628	Western (Oakland)
464.525	KXA751	Trans International (Oakland)
464.675	KVJ331	World Airways (Oakland)
151.775	KXD756	Flying Tiger (SFO)

Richard Prelinger (CASF-002)

Listed below, are airports in California which have airline company frequencies. The book had nothing pertaining to Riverside or Norton & March Air Force Bases. I cannot guarantee these frequencies to be current since the book was published in January, 1976.

Los Angeles----129.15--British Airways
129.20--American & Northwest
129.25--Los Angeles Helicopter
129.40--United
129.50--United
129.55--Delta (Atlanta)
129.60--Hughes Airwest
129.70--Pan Am
129.80--Texas International
129.90--Trans World
130.00--Golden West
130.10--Western
130.50--Continental
130.70--Hughes Airwest
130.95--Eastern (Atlanta)
131.10--Hughes Airwest
131.15--Pacific Southwest
131.25--National
131.45--Delta
131.65--Universal Aviation
131.75--Flying Tiger Line
131.80--Trans World

Ontario--------129.20--American
129.35--Air California (Santa Ana)
129.50--United
129.60--Hughes Airwest
130.10--Western
130.70--Hughes Airwest
130.90--Pacific Southwest
131.10--Hughes Airwest
131.80--Trans World

Santa Ana------129.60--Hughes Airwest
130.70--Hughes Airwest
131.10--Hughes Airwest

Mark Holmes (IL-008)

DISPATCH COUNTER

LF/MF EDITION NR 1

UNITED STATES AIR FORCE
AND UNITED STATES NAVY

RADIO FACILITY CHARTS

AND IN-FLIGHT DATA

UNITED STATES

CORRECTED TO 8 JANUARY 1958

SPECIAL NOTICE
See page 219 for Test of Expanded Radar Service Andrews Air Force Base Area effective 15 January through 15 March 1958.

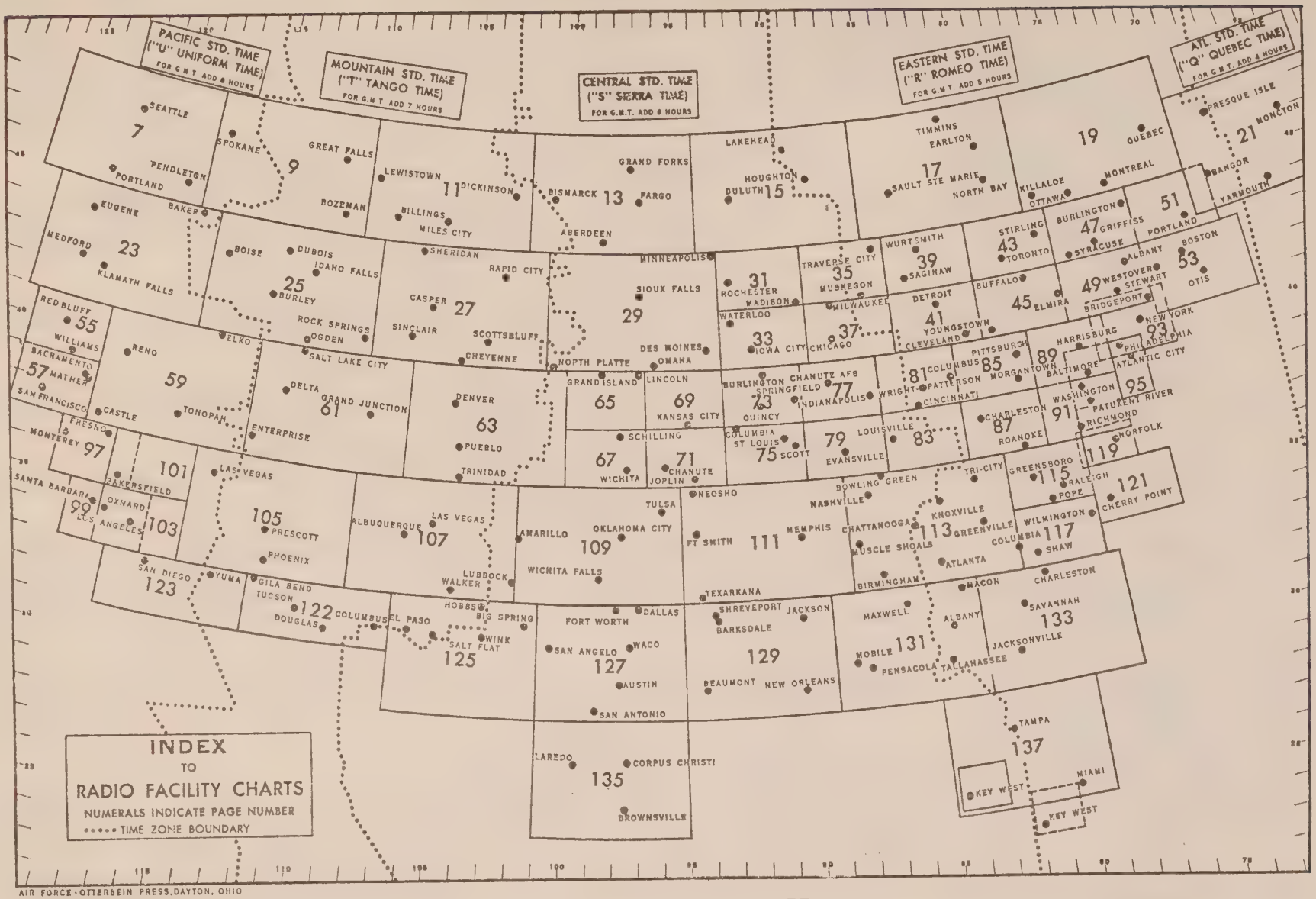
SPECIAL NOTICE
See pages 63A and 63B for New Blow up of the Denver area.

Page copies available :
→ $1 ←
Major Ron Hammer
821 Elisa Way,
Roseville, CA 95678

THESE CHARTS TO BE USED ONLY AS AN AID TO NAVIGATION

PUBLISHED UNDER AUTHORITY OF THE SECRETARY OF THE AIR FORCE
AND THE SECRETARY OF THE NAVY

DISTRIBUTION DATE 18 JAN 1958


PACIFIC STD. TIME ("U" UNIFORM TIME) FOR G.M.T. ADD 8 HOURS
MOUNTAIN STD. TIME ("T" TANGO TIME) FOR G.M.T. ADD 7 HOURS
CENTRAL STD. TIME ("S" SIERRA TIME) FOR G.M.T. ADD 6 HOURS
EASTERN STD. TIME ("R" ROMEO TIME) FOR G.M.T. ADD 5 HOURS
ATL. STD. TIME ("Q" QUEBEC TIME) FOR G.M.T. ADD 4 HOURS
INDEX TO RADIO FACILITY CHARTS
NUMERALS INDICATE PAGE NUMBER
TIME ZONE BOUNDARY
SEATTLE 7 PENDLETON PORTLAND
SPOKANE 9 GREAT FALLS BOZEMAN
LEWISTOWN 11 DICKINSON BILLINGS MILES CITY
GRAND FORKS BISMARCK 13 FARGO ABERDEEN
LAKEHEAD HOUGHTON DULUTH 15
TIMMINS EARLTON 17 SAULT STE MARIE NORTH BAY
19 QUEBEC MONTREAL KILLALOE OTTAWA
PRESQUE ISLE 21 MONCTON BANGOR YARMOUTH
EUGENE BAKER MEDFORD 23 KLAMATH FALLS
BOISE DUBOIS IDAHO FALLS 25 BURLEY ROCK SPRINGS OGDEN
SHERIDAN CASPER 27 SINCLAIR RAPID CITY SCOTTSBLUFF CHEYENNE
MINNEAPOLIS SIOUX FALLS 29 DES MOINES NORTH PLATTE OMAHA
31 ROCHESTER MADISON WATERLOO IOWA CITY
TRAVERSE CITY 35 MUSKEGON MILWAUKEE CHICAGO 37
WURTSMITH 39 SAGINAW DETROIT 41 YOUNGSTOWN CLEVELAND
STIRLING 43 TORONTO BUFFALO 45 ELMIRA
BURLINGTON 47 GRIFFISS SYRACUSE ALBANY PORTLAND BOSTON 53 OTIS
49 WESTOVER STEWART BRIDGEPORT NEW YORK 93 PHILADELPHIA
RED BLUFF 55 WILLIAMS SACRAMENTO 57 MATHER SAN FRANCISCO
RENO 59 CASTLE TONOPAH ELKO SALT LAKE CITY
DELTA GRAND JUNCTION 61 ENTERPRISE
DENVER 63 PUEBLO TRINIDAD
GRAND ISLAND 65 LINCOLN SCHILLING WICHITA 67
KANSAS CITY 69 CHANUTE JOPLIN 71
BURLINGTON CHANUTE AFB SPRINGFIELD 73 QUINCY COLUMBIA ST LOUIS 75 SCOTT
INDIANAPOLIS 77 LOUISVILLE EVANSVILLE 79
WRIGHT-PATTERSON 81 CINCINNATI COLUMBUS 83
PITTSBURGH MORGANTOWN 85 CHARLESTON ROANOKE 87
HARRISBURG BALTIMORE 89 WASHINGTON 91 PATUXENT RIVER 95 RICHMOND ATLANTIC CITY NORFOLK 119
FRESNO MONTEREY 97 BAKERSFIELD SANTA BARBARA 99 OXNARD LOS ANGELES 101 103
LAS VEGAS 105 PRESCOTT PHOENIX
ALBUQUERQUE LAS VEGAS 107
AMARILLO OKLAHOMA CITY 109 WICHITA FALLS LUBBOCK WALKER
TULSA NEOSHO FT SMITH 111 MEMPHIS TEXARKANA
BOWLING GREEN NASHVILLE TRI-CITY CHATTANOOGA KNOXVILLE 113 GREENVILLE MUSCLE SHOALS ATLANTA BIRMINGHAM
GREENSBORO 115 POPE RALEIGH 121 CHERRY POINT
WILMINGTON COLUMBIA 117 SHAW
SAN DIEGO 123 YUMA GILA BEND TUCSON DOUGLAS
122 COLUMBUS EL PASO HOBBS BIG SPRING WINK SALT FLAT 125
FORT WORTH DALLAS SAN ANGELO WACO AUSTIN 127 SAN ANTONIO
SHREVEPORT JACKSON BARKSDALE 129 BEAUMONT NEW ORLEANS
MACON MAXWELL ALBANY MOBILE 131 PENSACOLA TALLAHASSEE
CHARLESTON SAVANNAH 133 JACKSONVILLE
LAREDO CORPUS CHRISTI 135 BROWNSVILLE
TAMPA 137 KEY WEST MIAMI KEY WEST

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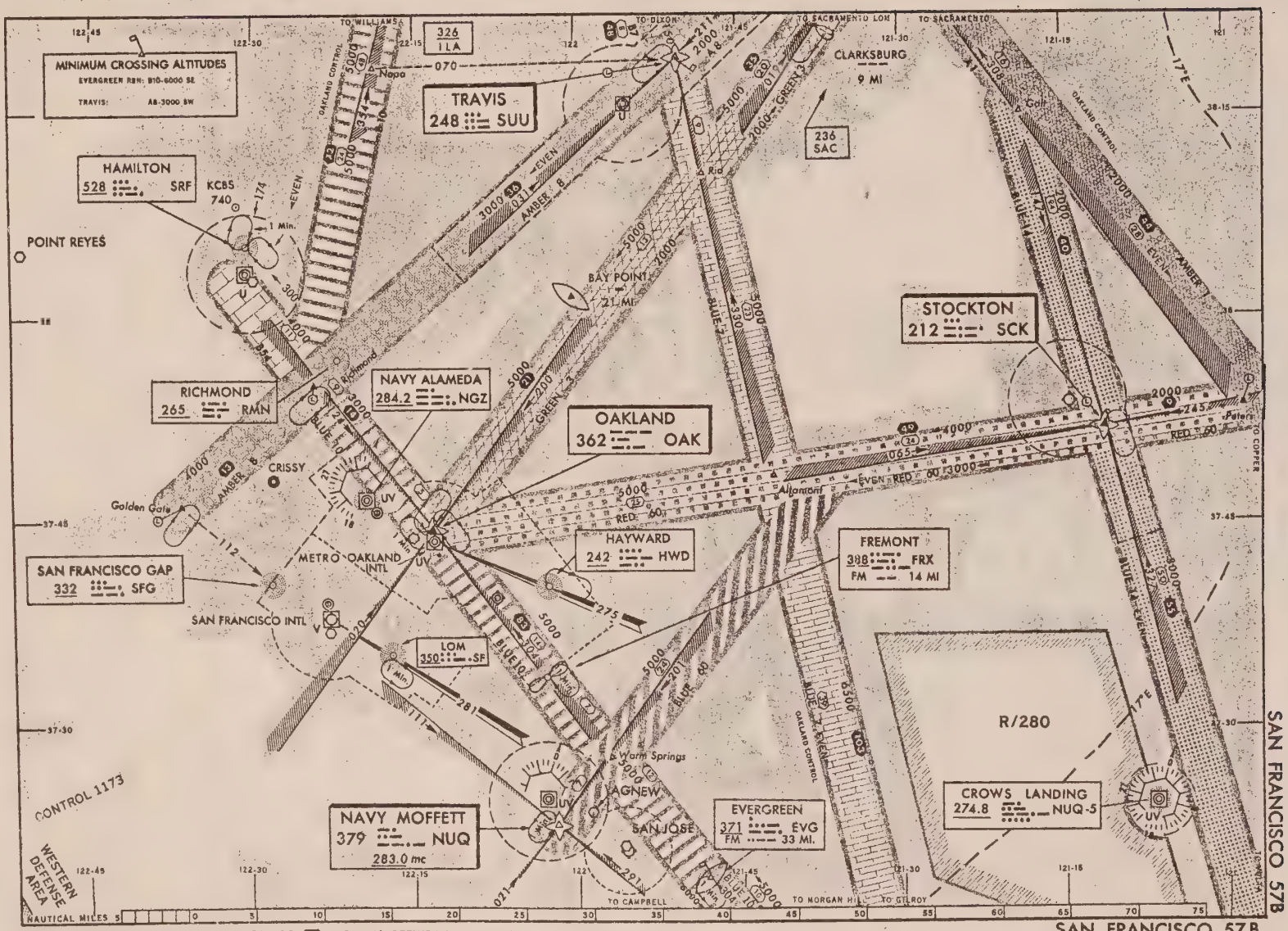
AERODROME OR FACILITY			AIDS TO NAVIGATION						A/G VOICE		TOWER		I.L.A.	REMARKS
NAME	ELEV IN FEET	OPR BY	TYPE	CALL OR IDENT	FREQUENCY GROUND	CLASS POWER	FAC TO FLD BRG	FAC TO FLD MI	CALL	FREQUENCY GROUND	CALL	FREQUENCY GROUND	TYPE	
AGNEW		CAA	Omni	AGW	117.6	BVOR-E	288	22.4						To San Francisco Intl.
ALAMEDA NAS (Landplane)	15	USN	RBn Tacan	NGZ NGZ	284.2 Chan 85	MHW	At At 281 296	FLD FLD 4.8① 3.7③	Navy Alameda Radio③ Oakland APC Departure Con	236.2-132.3 11266 x-6723 3130 x 269.2-250.4-*243.0* 140.22-126.18 *121.5* 3023.5R-362T 274.3	Navy Alameda Tower Gnd Con	318.6④-250.6-233.8-236.6 *243.0*-142.74-126.18-*121.5* 3053⑤-3023.5R-257T 263.4	Radar	①Fr Oakland LF rng. ②Fr Oakland VOR. ③Universal A/G CW 4710.5, 9035, 11266 x; Call: NGZ. TransPac CW backup. ④Prim seaplane freq. ⑤Secd seaplane freq.
(Seaplane)	SL						281	4.8⑥					Radar	Use landplane twr. ⑥Fr Oakland LF rng to landplane rwy 25L.
CRISSY AAF	8	A									Tower	126.3-126.18-*121.5*		0630-1900P Mon-Fri, other hrs O/R.
CROWS LANDING ALF	165	USN	RBn Tacan	NUQ-5 NUQ-5	274.8 Chan 39	MHW	At At	FLD FLD			Navy Crows Ldg Twr	233.8-250.6-*243.0* 142.74-126.18-*121.5* 3023.5R-400T		
EVERGREEN		CAA	RBn	EVG	371	HW								32.6 mi on SE crs Oakland LF rng.
FREMONT		CAA	RBn	FRX	388	MHW								13.9 mi on SE crs Oakland LF rng.
HAMILTON AFB	4	AF	Omni RBn	SRF SRF	109.0 528	TVORW HWZ	At 167 075	FLD 1.8 16.5①	APC (RAPCON)	363.8-*243.0* 137.88-*121.5*	Tower	236.6-275.8-*243.0* 126.18-*121.5*	Radar	PFSV on 137.88 O/R thru twr; PFSV on 344.6 0700-1600P, wx obsr svc O/T. ①Fr Pt Reyes VOR.
HAYWARD	46	CAA	RBn	HWD	242	MHW	243	4.0	Oakland APC Departure Con	269.2-250.4-*243.0* 140.22-126.18 *121.5* 3023.5R-362T 274.3	Tower①	295.4-126.18-139.32 137.88-*121.5* 3023.5R-219T		①0800-1630P; opr by ANG.
MOFFETT FIELD NAS	38	USN	Range RBn Tacan	NUQ NUQ NUQ	379 283.0 Chan 77	SMRLZ MHW	324 324 At 269	1.4 1.4 FLD 3.2①	Navy Moffett Radio Navy Moffett APC	250.6-233.8-236.6-*243.0* 142.74-126.18-*121.5* 3023.5R 236.2 132.3 3023.5R-379T	Navy Moffett Tower	233.8-250.6-236.6 236.2-*243.0* 142.74-126.18-*121.5* 3023.5R-396T	Radar	All Weather Air Station. ①Fr Agnew VOR.
OAKLAND		CAA	Range Omni	OAK OAK	362 116.3	SBRAZ BVOR-E	200 095	0.2① 1.3①	RADIO Center	255.4-*243.0* 135.9-135.0T 3023.5R 301.4-355.8-335.6 326.2-317.5-*243.0* 120.3-124.9-124.3 119.7-118.9				①To Oakland Intl (NAS). See Special Notice page 214 for VHF communications procedures in San Francisco/Oakland area.
OAKLAND INTL (METROPOLITAN) (NAS)	5	CAA	Localizer	I-OAK	109.9		200 095	0.2① 1.3③	Oakland APC Departure Con	269.2-250.4-*243.0* 140.22-126.18 *121.5* 3023.5R-362T 274.3	Oakland Tower Gnd Con	257.8-*243.0* 126.18-*121.5* 3023.5R-341T 348.6	ILS-E Radar	①Fr Oakland LF rng. ③Fr Oakland VOR.
POINT REYES		CAA	Omni	PYE	113.7	VORW-E								
RICHMOND		AF	RBn	RMN	265	MHW	300	8.2						To Hamilton AFB.
SAN FRANCISCO INTL (Landplane)	11	CAA	Range Omni Localizer	SFO SFO I-SFO	227 111.8 109.5	SBMRLZ TVOR	292	2.6	Radio APC Departure Con	255.4-*243.0*-135.9 135.0T-3023.5R 290.3-269.4-*243.0*-126.18 *121.5*-3023.5R-111.8T-109.5T 367.2	Tower	263.0-284.6-*243.0* 126.18-*121.5* 3023.5R-201T	ILS-E Radar	
SAN FRANCISCO CGAS (Seaplane)	SL	USCG							San Francisco Air①	381.8-*243.0* 143.28 x-*121.5* 8984 x-5695.5 x-3123 x				Use flt plan destn identifier "SFS". ①0800-1600P; O/T O/R. Other CG freq O/R. CW call: NOB.
SAN FRANCISCO GAP		CAA	RBn	SFG	332	MHW	111	4.9						To San Francisco Aprt.
SAN JOSE		CAA	Omni	SJC	108.2	TVORW					Tower	257.8-*243.0-121.5* 3023.5R-287T		
STOCKTON	28	CAA	Range	SCK	212	BMRLZ	285	2.8	RADIO	255.4-*243.0*-135.9 135.0T-*121.5*-3023.5R	Tower	257.8-348.6-*243.0* 126.18-*121.5*-3023.5R-299T		
TRAVIS AFB	58	AF	Range①	SUU	248	SMRAZ	211 221	3.4 19.8③	APC (RAPCON) TCC	363.8-*243.0* 137.88-*121.5* 349.4	Tower	236.6-341.4-275.8-*243.0* 126.18/126.20-*121.5* 3023.5R-248T	Radar	PFSV on 344.6. ①Splits & multiples beyond 20 mi. ③Fr Sacramento VOR.

FOR DF SEE PAGES 144-149;
X—On Request R—Receive T—Transmit

FOR RADAR SEE PAGES 157-171;

FOR ILS SEE PAGES 172-177



NOTE: FOR ADIZ PROCEDURES SEE PAGE 225 (20) DISTANCE BETWEEN COMPULSORY REPORTING POINTS.
(20) DISTANCE BETWEEN REPORTING POINTS AND/OR RADIO FACILITIES.
GMT = Std Time +8

AIRWAY WIDTHS ARE NOT DRAWN TO SCALE ◇ INDICATES RADIO RANGE STATION

SAN FRANCISCO 57B

International

Richard Stein, Editor

This column is for reporting two-way communications frequencies above 30 MHz, radio system details, monitoring experiences, and any other information relating to monitoring in countries other than the United States and Canada. Send to: Richard Stein, 456 Barrymore Place, North Brunswick, NJ 08902.

MORE FROM DOWN UNDER

We continue with more information from Australia, sent to us again by Arthur Blake (001-AUST). He has done a magnificent job in collecting and providing some fine frequency information.

SOUTH AUSTRALIA

POLICE: call sign VL5OP

Low Band:	72.975	UHF	468.425
	73.100		468.475
	73.150		468.500
	73.162		468.525
	73.187		468.725

UHF frequencies duplicate VHF transmissions. UHF repeaters in cars transmit on a talk thru basis from portables. HF is also used in country areas and these cars bristle with antennas for all three bands.

•••••••

Largly voluntary paramedic service. Full use made of State Emergency Helicopter- Rescue-1.

Electricity Supply: call sign VL50Z

164.450	Service (also 85.625)
164.480	Grid Switching
164.510	Emergency

Water Supply 162.040

In response to my comment to him concerning the various sources of frequency information now available to us (Police Call, FCC Microfiche cards, etc.), Arthur responds:

> "You are indeed fortunate in having access to official frequency information.One would be excused in thinking that they are covered by the Official Secrets Act in Australia and certainly not available to the public. An acquaintance who is an executive technician in "Telecom" was horrified when I once approached him for some specific information. S.T.C two way radio manufacturers/suppliers also once pointed out the illegality of my approach to them for frequency information on Metro Fire Brigade frequencies. This of course means that all my frequency data is gained the hard way- listening and logging. I think it would be prudent to await the re-write of the 'Wireless Telegraphy Act' before making any further approach for frequency information. Two schools on the rewrite have been expressed as 'likely'. 1) No controls on receiving (except where harmful emissions occur from receiving equipment) and 2) rewording to (again) make unauthorized receiving illegal. (favored by police commissioners.)"

Again a big thank you to Arthur for very good information. He also promises more information from Melbourne for future Newsletters. Well, until next month- have a Happy Easter and חג שמח,חג האביב שלום

Beginners ??? Corner

Have a question? If you are a new scanner listener and don't understand something about monitoring that almost everyone else seems to understand, send in your question. When possible, your question and the answer will be printed. No answers will be sent by return mail. Your name will not be printed. Write to: David-E. Crowley, 7234 Balson Ave., University City, MO 63130.

Q. In my area, 153.800 MHz is very active, but is a "birdie" for my Bearcat 210. How can I cure this problem?

A. 153.800 MHz is a birdie for my BC210, but 153.800 MHz is not, and it's only 5 kHz away from 153.800. For some reason, this birdie extends from 153.800 through 153.815 but not below 153.800. The image trick will not work in this case: 153.800 + 2·10.8= 175.400 MHz, 1.4 MHz above the 174.000 limit for the BC210.

Comments for the month: Several readers responded to the March 1981 question about the mobile speaker-amplifier: 1) Capri Electronics, Route 1, Box 91-1J, Canon GA 30520, sells the K-801 audio amplifier which is small enough to fit into most speaker enclosures; 2) Radio Shack speaker control: Position A controls the regular full stereo radio/tape unit, Position B controls the scanner audio, which is fed to the car stereo speakers as a mono signal; 3) Motorola used to make a 15 watt speaker amplifier under its "MOCOM" line. The latest model is in the "MICOR" line and is available off the shelf, but probably very expensive. Try used two-way equipment dealers for the MOCOM model.

Marketplace

Gary M. Darcy, Editor

Members may advertise, free of charge, items wanted, items for sale, and items for trade that are associated with the hobby of monitor/utility radio listening. No dealer ads will be accepted for this column. RCMA assumes no responsibility for the outcome of any transactions between members resulting from ads printed in this column. Send to: RCMA MARKETPLACE, c/o Gary M. Darcy, P.O. Box 1329, Palmdale, CA 93550. Please be sure to include your membership number.

FOR SALE: Bearcat BC-300. New condition & perfect. Original carton. $ 325.00. Contact: BOB GROVE (NC-006), Rt. 1 Box 240, Brasstown, NC 28902 (*)

FOR SALE: Eddystone 770-U 145-512 mhz AM/FM laboratory receiver. High sensitivity. Like new condition. $ 325.00 shipped. Contact: BOB GROVE (NC-006), Rt. 1 Box 240, Brasstown, NC 28902. (*)

FOR SALE: Palomar Engineers loop amplifier and loop antennas for 2-15 mhz. New condition. $ 85.00. Contact: BOB GROVE (NC-006), Rt. 1 Box 240, Brasstown, NC 28902. (*)

FOR SALE: Tennelec Memoryscan MS-1. Brand new w/ accessories & code book. Asking $ 175.00 to include U.P.S. shipping. Contact: BILL HALPIN (CA-SB-024), 3 Stratolifter Ct., Norton AFB, CA 92409. (*)

FOR SALE: Regency Digital Flight Scan. 2 years old, still like new. $ 200.00. Please call first. Contact: TOM PAMIN (PA-003), 3151 W. 25th St., Erie, PA 16506 phone 814-833-5729. (*)

FOR SALE: Bearcat 4-6. Includes rubber ducky & carrying case. $ 100.00 includes shipping. Contact: JEFFERY HOOPER (GA-027), Rt 3 Box 91, Blairsville, GA 30512 or phone 404-745-2504 after 5:00 pm. (*)

FOR SALE: Regency K-100. Very good condition; works perfectly. Under warranty. $ 225.00. Contact: JOHN LAND (IN-039), R.R. 7 Box 210, Greenfield, IN 46140 or phone 317-894-3289 (no collect calls, please). (*)

FOR SALE: Regency 4-channel hand-held scanner w/crystals for: 155.01 / 155.37 / 155.565 / 155.64. Just returned from factory, but still does not work properly. Good for someone with a little electrical knowledge. $ 20.00. Contact: AL BATT (MN-009), Box 37, Hartland, MN 56042 or phone 507-845-2836. (*)

FOR SALE: Collins AS-1405 directional antenna. 200-400 mhz. Adjustable sections. Like new, in case. $ 60.00. Contact: MICHAEL P. MURPHY (CA-SD-033), 738 Laguna St., El Cajon, CA 92020 or phone 714-442-7049. (*)

FOR SALE: Collins AS-1404 omnidirectional antenna. 200-400 mhz. Good condition. $ 20.00. Contact: MICHAEL P. MURPHY (CA-SD-033), 738 Laguna St., El Cajon, CA 92020 or phone 714-442-7049. (*)

FOR SALE: R-442A/URC Receiver. 30-75.95 mhz. Digital tuned (mechanical). FM - signal or tone activated squelch. Operates on 24-28 Volts DC @ 2 amps. $ 175.00. Contact: MICHAEL P. MURPHY (CA-SD-033), 738 Laguna St., El Cajon, CA 92020 or phone 714-442-7049. (*)

**EDITORS COMMENT: In addition to the items listed above, Michael also has a transceiver covering 30-75.95 mhz for sale and lots of other surplus items that he wishes to sell or trade. If you send him a SASE he will send you a list. Send to: MICHAEL P. MURPHY (CA-SD-033), 738 Laguna St., El Cajon, CA 92020.

FOR SALE: Panasonic RF-2800 shortwave utility receiver. Digital readout, BFO, RF gain, etc.. Like new, in original box w/warranty card. $ 200.00. Will ship U.P.S./Insured. Contact: JOHN GUNDERSEN (MN-014), 1246 University Ave., St. Paul, MN 55104. (*)

FOR SALE: Heathkit Model GR-1132 scanner w/8 crystals. $ 80.00. Contact: JOHN WILEY (IL-170), 421 W. Bryn Mawr, Roselle, IL 60172. (*)

FOR SALE: Realistic Pro-7B 8-channel crystal controlled scanner. In original packing carton w/manual & mobile mounting bracket. Still in very good condition. $ 80.00 + U.P.S. shipping costs. Contact: ERIC VINCENT (CA-LA-216), 720 W. 27th St. #233, Los Angeles, CA 90007. (*)

FOR SALE: Yaesu-Musen FRG-7 SW Receiver. Like new w/manual. $ 200.00. Contact: W. SCHWEIKERT (NJ-068), 114 Keyport Rd., N. Cape May, NJ 08204 or phone 609-886-8566.

FOR SALE: MFJ-1020 Active Antenna w/manual. $ 45.00. Contact: W. SCHWEIKERT (NJ-068), 114 Keyport Rd., N. Cape May, NJ 08204 or phone 609-886-8566.

FOR SALE: Bearcat BC-300. Mint Condition. $ 330.00. U.P.S. shipping paid. Contact: HARRY McCABE (NC-008), 898 Old Orangeburg Rd., Lexington, SC 29072.

FOR SALE: Bearcat BC-250. Less than 3 months old, but has the microprocessor that will program out-of-band in the 406-420 mhz range. $ 240.00. U.P.S. shipping paid. Contact: HARRY McCABE (NC-008), 898 Old Orangeburg Rd., Lexington, SC 29072.

FOR SALE: Regency Touch K-500. Purchased 10/80. Warranty card still in box. $ 225.00. U.P.S. shipping paid. Contact: HARRY McCABE (NC-008), 898 Old Orangeburg Rd., Lexington, SC 29072.

FOR SALE: Regency ACT-E-16HLU. Good Condition. $ 100.00. U.P.S. shipping paid. Contact: HARRY McCABE (NC-008), 898 Old Orangeburg Rd., Lexington, SC 29072.

FOR SALE: Midland UHF (450-512 mhz) pocket scanner w/professional walkie talkie rubber antenna. Mint condition. $ 50.00. U.P.S. shipping paid. Contact: HARRY McCABE (NC-008), 898 Old Orangeburg Rd., Lexington, SC 29072.

FOR SALE: Bearcat crystals for the following frequencies: 42.72 / 42.78 / 453.05 / 453.20 / 453.50 / 453.70 / 460.45. $ 2.00 each or all 7 for $ 10.00. Contact: HARRY McCABE (NC-008), 898 Old Orangeburg Rd., Lexington, SC 29072.

FOR SALE: Regency type crystals for the following frequencies: 37.10 / 37.94 / 39.10 / 39.18 / 39.50 / 40.84 / 42.06 / 42.56 / 42.58 / 42.62 / 42.64 / 42.66 / 42.72 / 42.74 / 42.76 / 42.78 / 42.84 / 45.08 / 46.02 / 46.58 / 47.50 / 47.58 / 153.11 / 153.95 / 154 115 / 154.83 / 154.92 / 155.01 / 155.13 / 155.265 / 155.37 / 155.505 / 155.52 / 155.61 / 155.73 / 155.745 / 155.79 / 155.895 / 156.09 / 158.82 / 159.03 / 161.70 / 453.05 / 453.10 / 453.30 / 453.40 / 453.45 / 453.50 / 453.60 / 453.70 / 453.90 / 458.40 / 458.90 / 460.05 / 460.10 / 460.20 / 460.40 / 460.80 / 462.20. $ 2.00 each or all 59 for $ 100.00. Contact: HARRY McCABE (NC-008), 898 Old Orangeburg Rd., SC 29072.

WANTED: Schematic or service manual for the Motorola Model L03FNB-1102A tube-type VHF Hi single channel monitor receiver. Service manual is Motorola part number 68-862-450, but Motorola unable to supply. Contact: DAVID CROWLEY (MO-009), 7234 Balson Ave., University City, MO 63130 or phone 314-454-3395 or 314-862-2758.

WANTED: Wish to buy 1 or 2 good cassette recordings with radio communications from the U.S. I am most interested in police, fire, UHF aircraft, military and if possible sattelite communications. Contact: ARVE AAKRE (NOR-001), Briggveien 19A, N-4620 Vagsbygd, Norway.

FOR SALE: Realistic DX-300 Communications Receiver. In mint condition w/ original carton & owners manual. 1 year old. $ 300.00 C.O.D. Contact: COMPTON FERRIER (DC-001) at 202-423-8175. NO COLLECT CALLS PLEASE!!!

FOR SALE: SBE Opti-Scan. In good condition w/telescoping antenna, AC & DC cords, 20 programming cards, and complete manuals, schematics and programming book, plus out-of-band programming instructions. $ 200.00 or make offer. Contact: JORGE RODRIGUEZ (FL-034), 1129 Castille Dr., Coral Gables, FL 33143.

FOR SALE: Bearcat III 8 ch. VHF/UHF scanner w/crystals for 162.55 & 155.865. Will receive with squelch open but will not stop when scanning (lights just blink). $ 10.00 or best offer. Contact: JORGE RODRIGUEZ (FL-034), 1129 Castille Dr., Coral Gables, FL 33143.

FOR SALE: Regency Flight Scan. 9 channel. 6 months old. Includes 14 crystals for March AFB, Palm Springs, Thermal, Big Bear, Hemet/Ryan, and helicopters. $ 100.00. Contact: C. L. CLAUSEN (CA-RI-016) at 714-658-7352.

FOR SALE: Bearcat BC-210. 1¼ years old. Good condition. $ 145.00. Contact: JOHN COSENZA (IL-155), 7501 W. 58th St., Summit, IL 60501.

FOR SALE: Regency Flight Scan. 9 channel crystal aircraft scanner w/7 crystals. $ 115.00. Contact: JOHN COSENZA (IL-155), 7501 W. 58th St., Summit, IL 60501.

FOR SALE: Regency K-100. In original box & in mint condition. $ 165.00. Will send U.P.S./Insured. Contact: LARRY STINEMAN (IN-037), 26495 CR 6 E., Elkhart, IN 46514 or phone 219-262-3343.

FOR SALE: Tennelec MS-2 Mem oryscan. 16 ch. programmable, VHF Hi-Lo/UHF, AC only. Excellent condition w/ manual & antenna. $ 115.00. Contact: RICHARD WOLTMANN (NY-128), 164 Asbury Ave., Carle Place, NY 11514 or phone 516-997-4449 evenings.

FOR SALE: Antenna Inc. Monitor Base Station Antenna. 25-512 mhz. Used for 3 months, still like new, and all parts in original box. $ 20.00. Contact: RICHARD WOLTMANN (NY-128), 164 Asbury Ave., Carle Place, NY 11514 or phone 516-997-4449 evenings.

FOR SALE: Bearcat BC-210. Used, but in good condition. Includes telescopic antenna & AC power cord. Sorry, no mobile mounting bracket or manual. $ 70.00. Will ship via U.P.S. Contact: LOUIS CAMPAGNA (PA-024), 9724 Bridle Rd., Philadelphia, PA 19115.

WANTED: Sonar Model FR-2524 8-channel UHF monitor receiver. Contact: ENOS EDWARD GARY (TX-028), 423 E. Locust St., San Antonio, TX 78212.

FOR SALE: Maps of PA radio systems, PA State Police, PA Turnpike, PA Forestry Service, PA Fish & Game Commission, PA Dept. of Transportation. Each map contains frequency information by specific area. 50¢ per map or $ 2.00 for the set to cover the cost of postage & copying. Contact: R. W. NEWBOULD (PA-027), 5321 Wolfe Dr. # 13, Pittsburgh, PA 15236.

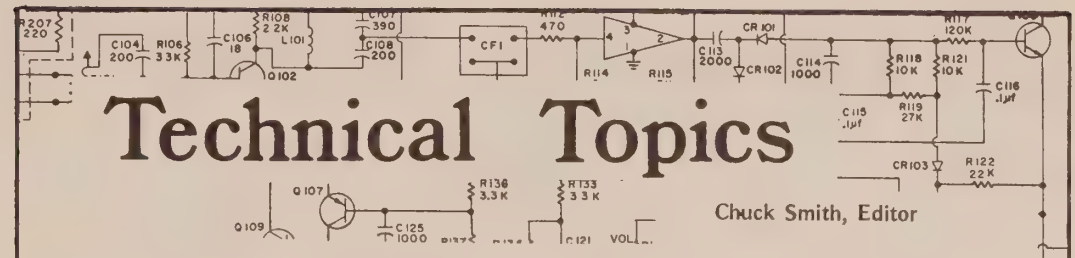
FOR SALE: Krystal Kits "PD" Receiver Scrambler Decoder. Will decode all single inversion modes of scrambled speech. Battery operated w/speaker. Just plug into your receiver. Never used. $ 35.00. Contact: TONY LOVING (NJ-005), 393 Grove St., Ridgewood, NJ 07450 or phone 201-652-5252 evenings & weekends.

FOR SALE: Regency ACTR-106 10-channel crystal controlled scanner. Tuned for 406-420 mhz band & VHF Hi-Lo & 450-470 mhz bands. Super sensitive UHF section. With crystals for all Secret Service & DEA national channels & NYC area FBI link frequencies. $ 150.00 complete. Contact: TONY LOVING (NJ-005), 393 Grove St., Ridgewood, NJ 07450 or phone 201-652-5252 evenings & weekends.

FOR SALE: Bearcat 101 16-channel programmable scanner. In excellent condition, w/original accessories in original carton $ 150.00 includes U.P.S. shipping. Contact: EDWARD KING (NJ-017), 14-31 Chandler Dr., Fair Lawn, NJ 07410.

FOR SALE: Regency K-500 40-channel programmable scanner. 1 yr. old w/original accessories and original carton. $ 150.00 includes U.P.S. shipping. Contact: EDWARD KING (NJ-017), 14-31 Chandler Dr., Fair Lawn, NJ 07410.

FOR SALE/TRADE: Realistic DX-100 4-band SW receiver. $ 80.00. Also, Panasonic RF-2600 Digital AM/FM/SSB 4-band receiver. $ 230.00. Will trade both for mint Elc, Sony ICF-6700W or Panasonic RF-4900. Will ship via U.P.S. Contact: MICHAEL WRIGHT (NY-067), 1414 E. 15th St., Brooklyn, NY 11230 or phone 212-627-7159.



Technical Topics

Chuck Smith, Editor

Send all equipment reviews, technical articles, technical tips, and questions on such subjects as receivers, antennas, preamps, accessory equipment, repeaters, links, tones, scramblers, non-voice data transmissions, or even computer applications for monitoring to: Chuck Smith, 4901 Heil Avenue, No. 3C, Huntington Beach, CA 92649.

Welcome, one and all, to the April 1981 issue of the RCMA Newsletter. Or is it the May issue?? Oh well, I'll probably never get used to writing my column so far in advance, but welcome to you all just the same.

First of all, I want to thank all those members who had a part in the general membership meeting this past month on the 20th of February. For the benefit of those living away from the Southern California area, the officers and local members of the RCMA here presented myself and the other six founding members with very nice engraved plaques which commemerated the founding of the RCMA back in May of 1975 and then we all sat around in the front of the room and reminisced about those formative days in our history. It was very enjoyable for me personally since I am not normally a regular meeting attendee, and this occasion gave me an excellent opportunity to renew acquaintances with those people who I see so infrequently. Anyway, thank you again and I hope we're around in four more years to celebrate the club's tenth anniversary.

The mailbag has been in much better shape around my house lately. I am very pleased to see that the volume has been increasing, at least to the point where I spend more time answering questions than I do sounding off on some editorial subject. Keep up the good work, and I promise to do my best to put out a column of the highest quality and interest.

THAT MYSTERIOUS SINGLE SIDEBAND

Last month I gave you all a brief discussion on the differences between amplitude modulation (AM) and frequency modulation (FM), and a real quick rundown on how both of these methods of modulation work. Well, as I promised at the time, this month I hope to clear away some of the mystery and confusion surrounding that method of modulation known as "single sideband", or SSB.

First of all, I should point out that the term single sideband is actually somewhat of a contraction of the actual technical term which is used to describe this form of modulation. The technically correct term is "single sideband suppressed carrier", the reasons for which will become much clearer as I proceed with this article.

In amplitude modulation, the carrier wave contains absolutely no intelligence whatsover, something like some people I know. The carrier is sent along "for the ride" and is used at the receiving end to act as a reference for the demodulation or detection process. If you remember, in amplitude modulation the audio signal is used to vary the instantaneous amplitude of the carrier wave in step with itself in order to transmit that intelligence along with the carrier wave. In doing this, we create two identical sidebands, one on either side of the carrier, and spaced above and below the carrier by the amount of the frequency of the modulating signal. For example, if a carrier wave at 10.000 MHz is modulated by a continuous tone with a frequency of 1 KHz,

then there will be created sidebands at 9.999 MHz and 10.001 MHz, along with the carrier at 10,000 MHz. At the receiving end, the carrier and sidebands are used in the detection process to recover the original modulating signal.

But we have two identical sidebands, one above the carrier wave and another one below, and they contain the same information. This is like taking along two copies of the same book just in case you miss something in the first one. We came eliminate one of these sidebands and not damage our ability to communicate in the least, and in doing so we can save the amount of RF power which had to go into that sideband. If we use a filter with the proper frequency, we can shave off that extra sideband without affecting the carrier wave and the desired sideband, and when we do this, we have single sideband. NOT single sideband with the suppressed carrier, but just single sideband; at this point we are still transmitting the carrier wave along so that it can be detected at the other end of the radio circuit. In fact, by doing this whole single sideband process very carefully, and using the right filters in the right combination at both the transmitting and receiving ends, we can put entirely different signals on the upper and lower sidebands, and in effect transmit two different things at the same time using the same carrier wave. When this is done, it is referred to as "independent sideband", and admittedly I haven't seen it done in years except occasionally in the military realm.

Now if we want to get rid of the wasteful carrier wave, which after all is just going along for the ride in order to provide a detection reference for the receiver, all we need to do is change the center frequency of that sideband filter of ours so that it also rejects the carrier frequency as well as the opposite sideband. We then we have an output from the SSB generator only when we have modulation; at all other times the output will be zero because the carrier has been suppressed. For the transmitting station this has the advantages of being able to take all of the RF power formerly put into two sidebands and a carrier wave and lump it all into one sideband, which is capable of producing useful communications. The transmitting tubes get very happy indeed because the duty cycle, or the ratio of time that the tube is doing work, is reduced greatly and the tubes run cooler and last longer for the same amount of RF output. The efficiency of the transmitter actually allows us to realize an increase in output of 4 times, or 6 db, over the AM transmitter. At the receiving end we realize another 3 db in signal-to-noise ratio, since with SSB we can reduce the bandwidth of the receiver to half of what it previously was, and with half the bandwidth we also receive only half the noise. So, to sum it up, the single sideband suppressed carrier system can perform as good a communications job with 100 watts of RF power as an AM station using 800 watts!

But.....like all ointments, this one also has a fly in it. You didn't think you were going to get away with all those improvements without paying some sort of price for it, did you?? No way, Jose, there are a couple of problems with single sideband that have to be discussed.

Let's start with the transmitter. With an AM signal, the modulating signal is usually applied at the final amplifier. This is referred to as high-level modulation, because it is done at a point in the transmitter where the power levels are high. The final amplifier in an AM transmitter can be a Class C amplifier, a class of amplifier which has high efficiency, on the order of 75% or so. High efficiency means that the tube dissipates a small amount of power itself and as a result runs cool. The Class C amplifier however, is extremely non-linear, and as a result generates tremendous amounts of harmonic energy. This harmonic energy, if radiated, would wreak havoc with other communi-

cations in the area, so it is suitably suppressed by the output network in the transmitter, which acts as a matching network to the antenna and a filter for the harmonics. The point is, we can use a simple, no-nonsense Class C amplifier for an AM transmitter.

Ha ha, no so with single sideband signals. The generation of the modulated signal and the filtering that I talked about earlier must take place at low-level stages in the transmitter, where the power levels are extremely low. Usually the SSB signal is generated at some lower frequency, such as 9 MHz, and then heterodyned up to the frequency range where it will be used. This is all because of the design requirements of the SSB filter. The filter must be sharp enough to reject the carrier and opposite sideband, while leaving the desired sideband untouched, and this requires a complex filter with many poles. Filters of this type are easily made at lower frequencies, and so we usually generate our SSB signal down at these lower frequencies. What's the point? The point is that the final amplifier is now required to amplify a signal that is already modulated, and in order not to cause vast amounts of destructive distortion, the amplfier must now be a linear amplifier, such as Class AB or two tubes operating Class B in push-pull. Due to the lower bias requirements of these amplifier classes, they have a lower efficiency, on the order of 60% for class AB. Less efficiency means that the tubes must dissipate more RF energy and therefore run hotter. Also, the bias requirements for linear amplfiers are much more stringent and as a result they require more care in their design and adjustment in order to prevent distortion and interference with adjacent stations.

As if that wasn't enough, we now go to the receiving end of the system. Without a carrier wave to act as a reference for the detection process, we cannot receive the SSB suppressed carrier signal. In order to do this, we must reinsert the carrier back where it would have been if it had been transmitted in the first place, and this must be done with a high degree of accuracy. The reinsertion of the carrier is done by an oscillator in the receiver known as the BFO, or beat frequency oscillator. This is the same oscillator that is used when receiving CW (Morse code), but we now use it to restore the carrier wave in its proper spot. Tuning a single sideband suppressed carrier signal is done by ear; tuning the receiver and the BFO (if adjustable) across the signal until the voice or whatever signal sounds natural again. If the signal and the BFO do not have the proper relationship to one another, the voice will either sound too low or too high in pitch, depending on the amount and direction of the error. This extra requirement on the receiver forces us to use a method of detection known as product detection, in which the input signal and the BFO are both fed into a mixer, the output of which is the product of the two input signals, thus the name product detector. The product detector is more complex and expensive than the simple diode detector, but the real rub is that to tune in and stay tuned in on single sideband signals, your receiver must be very stable, so that the signal and the BFO remain in their proper relationships once they are tuned in. This extra stability can mean a lot of difference in the price of a receiver. Nowadays, however, the state of the art has progressed to the point where even relatively simple and inexpensive receivers include product detectors and are capable of the degree of stability required to tune single sideband signals.

To sum up, single sideband provides a means of more efficiently using the crowded shortwave spectrum, and without transmitting the wasteful carrier waves that cause those squealing interference heterodynes, and yields benefits which far outweigh the extra complexity.

NEW PRODUCT NOTES

From Karl (CA-OR-22) comes the information that J.I.L. will soon be introducing a new scanner called the SX-200 with the following frequency ranges:

LOW BAND: 26.00-56.00 and 59.6-88.0 MHz
HIGH BAND: 108.00-184.00 MHz continuous
UHF BAND: 380.00-514.00 MHz continuous

The new receiver will also reportedly receive both AM and FM transmissions, but whether this ability is limited to the aircraft band I don't know. The frequency ranges alone are bound to make this new entry into the marketplace a great favorite among the military fans! Thanks for the info, Karl.

From Armand (PA-013), comes some equipment news for the shortwave enthusiast. In April of 1981 Yaesu plans to introduce two new pieces of equipment designed to enhance the performance of their popular FRG-7700 general coverage shortwave receiver. These are the FRV-7700 crystal converter and the FF-5 low-pass filter. By May of 1981 they reportedly plan to introduce the FRT-7700 antenna tuner for the same receiver.

The FRV-7700 crystal converter will allow the FRG-7700 to cover certain VHF frequency ranges, and will come in four models as follows:

Model A: 118-130 MHz, 130-140 MHz, 140-150 MHz
Model B: 118-140 Mhz, 140-150 MHz, 50-60 MHz
Model C: 140-150 MHz, 150-160 MHz, 160-170 MHz
Model D: 118-130 MHz, 140-150 MHz, 70-80 MHz

These converters should make it possible for those persons who are into shortwave listening to make their first inroads into the world of VHF public service monitoring.

Either separately or in combination, the FF-5 low-pass filter and the FRT-7700 antenna tuner should help the FRG-7700 in those instances where strong out-of-band signals are causing some overloading and intermodulation distortion. Those of you who have this Yaesu receiver may find a use for these interesting new accessiories, and I certainly thank Armand for informing me about them.

BEARCAT 250 MYSTERY

Matt (WA-012) seems to have a problem with his Bearcat 250 when scanning in the search mode between 470 and 512 MHz, and was afraid that programming the BC-250 out of band may have done some damage to the unit. Without printing the letter I think I may be able to offer some assistance and suggestions.

First of all, I can think of no possible damage, either permanent or temporary, that would be caused to any scanner by programming to scan out of band frequencies. This should not be of any concern to members that regularly do this, since the VCO in the radio will simply not lock when you get too far out of band and that will be that. On the other question, I can offer a bit of information about a quirk of the BC-250. That particular will not search across the barrier which exists at 470 MHz. For example, if you program in an upper and lower limit of 460 and 475 MHz, you will get an ERROR message when attempting to enter the upper search limit. Likewise the radio will not search using 470.00 Mhz as a lower limit; if you attempt to enter it as such you will also be told where to go by your radio. When you are searching upwards from below 470 MHz, you must stop short of this frequency, and when searching upwards above it, you must

start above it. There is evidently some sneaky constraint in the software which controls searching that establishes this frequency as a no-man's land, perhaps dividing the UHF and the UHF-T bands. Since the radio will not allow you to scan across band barriers (for example from VHF-low to VHF-high) this probably makes the most sense. I don't think there is anything wrong with your radio, however.

AN OLD DISCUSSION REVISITED--PREAMPS

I received a letter from Roger (CA-LA-235) who has been having a lot of trouble when trying to use a preamp in front of his Bearcat 220, and basically asks about the merits of using preamps with scanners.

Well Roger, I have long been known as a crusader against using "cheap" preamps in front of scanner receivers for a couple of reasons. The RF amplifiers in the scanners themselves have a limited dynamic range, which is the ability to handle weaker signals in the presence of extremely strong ones. When a receiver is presented with a signal too strong for it to handle, the RF amplifier will generate intermodulation products, which then appear as signals where there shouldn't be signals, sometimes interfering with desired reception quite badly. Please note that this can happen without using a preamp at all, but in most cases the scanner receivers are designed with sufficient care to prevent most of this.

When adding a preamp, you create two problems for yourself. The first is the chance that your scanner receiver may not be able to handle the stronger signals and will then overload and generate intermodulation. So even though the weaker signals are amplified, the amplified signals from the stronger ones may generate enough interference to blot them out again. The more serious problem that you may encounter is that a cheap preamp made with marginal parts and an inadequate design will often overload or generate these products itself, and then you're sunk, because the receiver cannot possibly distinquish between the real signals and the bogus ones created by the preamp.

Let me give you a free piece of neighborly advice about the use of preamps. If you don't have to use them, DON'T use them, and if you absolutely have to have one, use the smallest amount of gain that you can get by with and buy the best preamp that you can afford. Also remember that a low noise figure (less than 3 db) is a lot more important at VHF and UHF frequencies than just a lot of raw gain, and that if possible, using an external antenna with directional characteristics and aimed at the signals of interest is the best approach of all because not only will it increase the signal strength of the signals you want to hear, it will attenuate those which come from all other directions. Now is that a deal, or what??

That's it for this month, sports fans. Keep the cards and letters coming, and until then, good listening.

COMING NEXT MONTH: HOW TO READ THOSE SCANNER SPECS

AZ 033 FREESE, THOMAS P;2521 S MAPEL AVE;TEMPE, AZ 85281
AZ 034 HUNTER, JOHN W;3220 E SELLS DRIVE;PHOENIX, AZ 85018
CAAL031 HESSELSCHWERDT, GEORGE J;21174 LOCUST STREET
HAYWARD, CA 94541
CAHU002 BECK, JOHN E;PO BOX 174;ORLEANS, CA 95556
CAHU003 PHEGLEY, MARY JANE;1905 13TH STREET;EUREKA, CA 95501
CALA367 HUGHES, RAYMOND;1039 BILTON WAY;SAN GABRIEL, CA 91776
CALA368 HANLEY, DENNIS;6900 ENFIELD STREET;RESEDA, CA 91335
CALA369 GILLARD, WILLIAM H;834 S MAIN 235;LOS ANGELES, CA 90014
CALA370 BITNER, CARL L;4702 ALBURY;LAKEWOOD, CA 90713
CALA371 COHEN, PHIL;16769 MORRISON STREET;ENCINO, CA 91436
CALA372 CREECY, JAMES W JR;3433 W 108TH ST;INGLEWOOD, CA 90303
CALA373 PAWLUK, JOHN L;496 E HOLT AVE;POMONA, CA 91767
CALA374 PETERS, JAMES B;3842 COLLEGE AVE C;CULVER CITY, CA 90230
CALA375 MURRAY, KIM;4881 FIR ST;SEAL BEACH, CA 90740
CALA376 NAVARRO, AL;318 E 24TH ST;LOS ANGELES, CA 90011
CALA377 MARTIN, KEN;PO BOX 526;HARBOR CITY, CA 90710
CALA378 MACUMBER, CARLOS;PO BOX 567;PICO RIVERA, CA 90660
CALA379 LA MARCA, J.M.;11716 ALTA OAKS DRIVE;ARCADIA, CA 91006
CALA380 LARSON, JAMES R;963 E CALAVERAS STREET;ALTADENA, CA 91001
CALA381 KENNEDY, CHRIS;1101 E GRANDE AVE 4A;EL SEGUNDO, CA 90245
CALA382 KIRBY, DARRELL D;2018 LITCHFIELD AVE;LONG BEACH, CA 90815
CALA383 STREETER, L;3325 ENCINAL AVE;LA CRESCENTA, CA 91214
CALA384 MICHAEL;ARCADIA, CA 91006
CALA385 NEAL;VAN NUYS, CA 91401
CAME014 TWENTIER, CARL R;77 VIA LA CUMBRE;GREENBRAE, CA 94904
CAMO003 PAULEY, BARBARA;1133 WILDCAT CANYON RD
PEBBLE BEACH, CA 93953
CAMR002 HAMLIN, CASEY;1538 BAY ST;LOS BANOS, CA 93635
CANA003 WHALIN, DAVID;1432 MAIN ST;ST HELENA, CA 94574
CAOR185 CORNELIUS, SCOTT;54 FOX HOLL DR;IRVINE, CA
CAOR186 PAUL;FOUNTAIN VALLEY, CA 92708
CASA016 LUCAS, RON;6025 BUCKBOARD DR;RIO LINDA, CA 95673
CASA017 STARR, DENNIS B;2040 STOCKTON BLVD;SACRAMENTO, CA 95817
CASB036 TRAPP, ROBERT E;12758 ORANGE AVE;CHINO, CA 91710
CASC023 WIEGAND, WILLIAM;12141 TIPTOE LANE;LOS ALTOS, CA 94022
CASD036 HORSFALL, RICHARD A;302 W EASTRIDGE LANE
ESCONDIDO, CA 92025
CASD037 ZWEIGART, JOHN B;PO BOX 103;SANTEE, CA 92071
CASF020 BECK, ROBERT C;550 BATTERY ST 1209
SAN FRANCISCO, CA 94111
CASH004 LITILETON, JACK E;2127 SATURN SKYWAY;REDDING, CA 96002
CASL004 GIBSON, JOHN C;5265 MARIQUITA;ATASCADERO, CA 93422
CASR012 HEUMPHRUES, J.D.;3016 STATE ST;SANTA BARBARA, CA 93105
CASR013 UNZUETA, JOHN M;736 W SOLA ST;SANTA BARBARA, CA 93101
CAYO003 DRAKE, KELLY J;59 ARTIS LN;DAVIS, CA 95616
CO 027 MILLER, DANIEL E;STAR ROUTE BOX 282;ELIZABETH, CO 80107
CT 044 KERKES, JOHN E;75 HEMLOCK ST;BPT, CT 06605
DE 010 STEPHENSON, RALPH K;401 N BRADFORT ST;SEAFORD, DE 19973
FL 096 SUKUL, MORRIS;6301 FALLS CIRCLE DR N;LAUDERHILL, FL 33319
FL 097 RUSSELL, STEVEN D;4923 SPRINGFILED DR
WEST PALM BEACH, FL 33406
FL 098 WRUBLEWSKI, EDWARD J;2080 SUNNYSIDE PL;SARASOTA, FL 33579
FL 099 MOORE, JAMES B;RR 2 BOX 260-6;LEESBURG, FL 32748
FL 100 BOYD, RUTH M;725 60TH STREET SOUTH;GULFPORT, FL 33707
FL 101 BIEGAY, FRANK J;4800 NE BLUE HERON LN;BOX 38
JENSEN BEACH, FL 33457
FL 102 EHRLICHMAN, VIRGINIA;12884 SE PAPAYA ST
HOBE SOUND, FL 33455
GA 030 HARRIS, MORRIS;PO BOX 28;DAWSONVILLE, GA 30534
GA 031 BROOKS, DAVID;135 WOODCREST DRIVE;ATHENS, GA 30606
IA 025 WALKER, CARL M;2504 N OHIO AVE;DAVENPORT, IA 52804
ID 006 HIGGINS RADIO;PO BOX 44;KEOKUK, ID 52632

IL 174 FUCHT, JOHN L;3611 W 214TH PL/104;MATTESON, IL 60443
IL 175 SCHNELL, DOUGLAS;10 BAKER ST;KANKAKEE, IL 60901
IL 176 BURGESS, DAVID L;1023 S SCHMIDT;PEORIA, IL 61605
IL 177 CARUTHERS, VIRGIL;205 W 18TH AVE;COAL VALLEY, IL 61240
IN 046 BURDEN, ERNEST;RR 1;TENNYSON, IN 47637
KS 021 CANON, RICHARD L;1938 LINDENWOOD CIR;OLATHE, KS 66062
KY 023 HOWELL, JEFF E;PO BOX 237;MILTON, KY 40045
LA 020 GUIDRY, CLIFFORD J;308 W A SCHOOL ST;RAYNE, LA 70578
LA 021 RUSSELL, WAYNE L;6193 FLAG STREET;BATON ROUGE, LA 70812
MA 085 DYSART, R;26 STEVENSON AVE;EVERETT, MA 02149
MA 086 GOULD, LEONARD R;245 CABOT STREET;BEVERLY, MA 01915
MD 045 STONE, HAROLD L;327 ST GEORGES RD;BALTIMORE, MD 21221
MI 072 SELOVER, ROBERT O;31060 WESTGATE BLVD ?85
WALLED LAKE, MI 48088
MI 073 JOHNSON DONALD G;909 E PORTER ?1-D;JACKSON, MI 49202
MI 074 LAKITS, VICTOR T JR;16180 BEVERLY RD;BIRMINGHAM, MI 48009
MI 075 DROLIAS, MARK;5131 MIDDLESEX;DEARBORN, MI 48126
MI 076 BURR, CHARLES J;3117 BRUCKTON PL;SAGINAW, MI 48602
MI 077 CRIESER, GARY;174 N 21ST STREET;BATTLE CREEK, MI 49015
MI 078 DECKER, HAROLD J;554 TAWAS POINTE RD;EAST TAWAS, MI 48730
MN 029 ZIELSTRA, KEN;4505 SILVER CREEK RD NE;ROCHESTER, MN 55901
MO 045 QUADE, KENNETH G;LOT 54 MOBIL MANOR;KNOB NOSTER, MO 65336
MO 046 MULDOON, JAMES E JR;1379 SHAKONDALE CIRCLE ?N
FERGUSON, MO 63135
MO 047 DAGHISTANI, MUHAMMAD;7614 RAVENSRIDGE;ST LOUIS, MO 63119
MO 048 EATON, ZEL;904 E WALL;KIRKSVILLE, MO 63501
NC 027 HOWARD, WILLIAM;1340 BILTMORE DR;CHARLOTTE, NC 28207
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NH 014 MILLS, LOWELL J JR;9 WHIPPLE COURT;PORTSMOUTH, NH 03801
NJ 104 ROONEY, GERRY;750 BRISBIN AVE ?1;LYNDHURST, NJ 07071
NJ 105 SCHNEIDER, WILLAM;BOX 99 PIERSONS LN;BUTTZVILLE, NJ 07829
NJ 106 GRAY, TAFT JR;240 MT VERNON PL 4-A;NEWARK, NJ 07106
NV 009 CAPIAS, W.T.;1500 E KAREN AVE 238;LAS VEGAS, NV 89109
NY 001 FRY, JOHN L;1110 QUEENS PURCHASE H;BALTIMORE, NY 21221
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PA 127 ZURNAN, DANIEL M;223 E MAIN ST;LIGONIER, PA 15658
SC 012 ORVIN, CHRIS;RT 1 BOX 444;BONNEAU, SC 29431
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2) To try to be knowledgeable about two-way radio systems and operations.
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4) To share information with and help other monitor radio listeners.
5) To try to understand and improve receivers, antenna systems and related equipment.
6) To offer suggestions and formal recommendations to manufacturers of monitor receivers and to manufacturers of other products related to the hobby.
7) To offer suggestions for and encourage the organizing and conducting of RCMA meetings and tours for groups in any geographic area.
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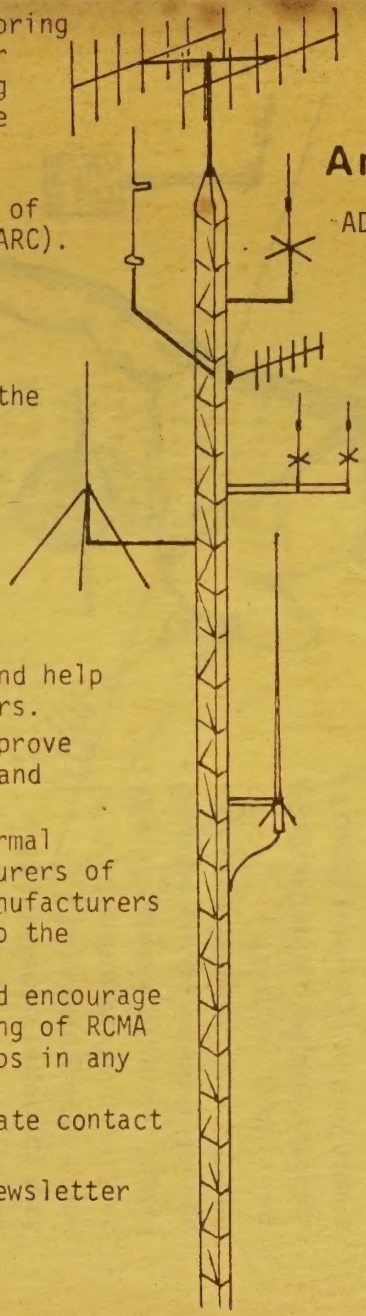

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